

CURRENT NOTES

Your Monitor on the World of Atari

Vol. 11, No. 10

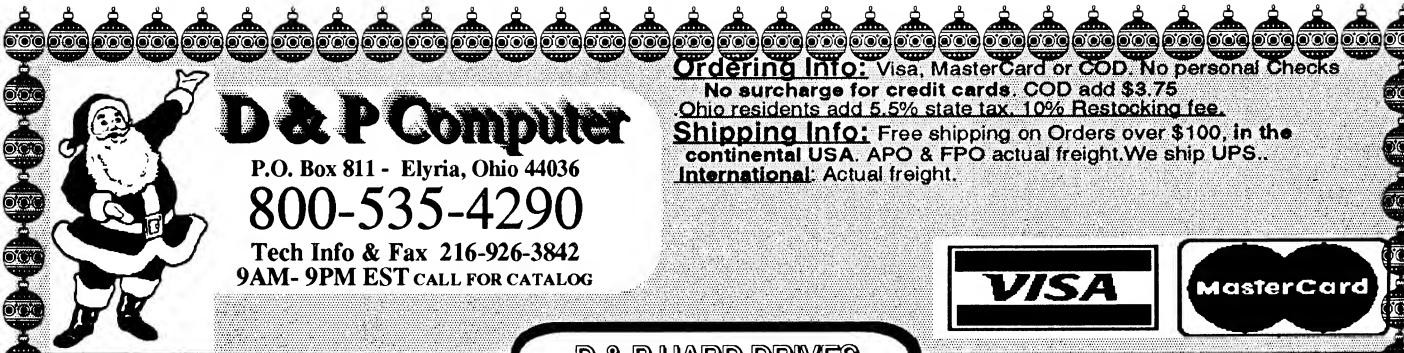
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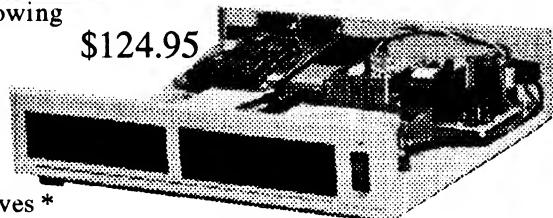
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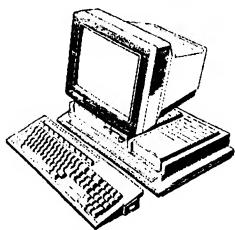
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ST EDITOR: Frank Sommers, 4624 Lang-drum Ln, Chevy Chase MD 20815 (301) 656-0719.

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COPY EDITOR: Joyce Waters

CN COLUMNISTS: John Barnes, Richard Gunter, Mike Heininger, Rick Keene, Brian Miller, Ben Poehland, Dave Small, Frank Sommers, David Troy, Sam Wright, Andrzej Wrotniak.

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CURRENT NOTES

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This publication is produced using an Atari Mega ST4, an Atari SM124 monochrome monitor and a Moniterm Viking monitor, a Navarone scanner, and the Atari SL.M804 laser printer. Most of the output is generated with *Calamus*. Some pages, including advertisements, are produced with *PageStream* and others with *Publisher ST*.

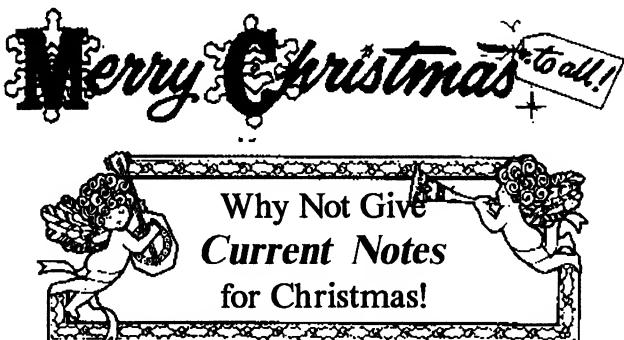
The cover: Will there be an Atari under your Christmas tree this year? After all, if you want multi-tasking, just buy another computer and there won't be such a long wait to get to the computer. Photo by Mike Heininger, copyright 1991.



The Christmas clip art on these two pages comes from CN disk #600D: Christmas Scenes No.1.

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From the Editor's Desk

by Joe Waters

If there is anything that can be said with certainty about the computer market, it is that there is no certainty. Atari owners end this year wondering what fate has in store for 1992. It's not clear that owners of other, more mainstream, computers face the new year with such uncertainty, but the producers of those mainstream computers do. IBM, Apple, Compaq, Next—all have had major setbacks and have been forced to pare back their labor force. Although "IBM compatibility" dominates the U.S., IBM computers do not; IBM has continued to see its market share decline. Once loyal Apple employees are picketing their "former" employer. Compaq has experienced a \$70 million loss and the forced departure of CEO Rod Canion. Next Inc. recently laid off 30 employees (5 percent of its workforce).

The country is in a recession and the computer industry is in a slump. Computer manufacturers are having a hard time, but the recession only accounts for some of their problems. This industry has been built on name brand recognition. "I just bought an IBM." "I have a COMPAQ." "My APPLE is terrific." But there are several forces working against vendor-specific, name-brand products.

The first force is competition. A PC-clone has become a "generic" product. Almost any run-of-the-mill clone can do exactly what the high-end IBM or COMPAQ computers do. So why pay the higher price for the brand name? Most people find little reason to do so and, therefore, buy the clone. The shares of the "big" companies continue to fall.

Another major force acting on computer manufacturers is integration. Individual departments in major companies brought in loads of PCs in the past few years. Now businesses find that they have a big investment in PCs and want to start seeing some benefits. One of the most important benefits occurs when you link all these computers together. But that means all these strange computers have to be able to talk to each other. Normally, computers from different companies can not communicate with each other; they can not share data; they can not run the same programs.

But, if "standards" are adopted, and if the computer manufacturers abide by the standards, then disparate machines can be networked together. And that is precisely what industry wants. With standards, each department can use the kind of computer they find most advantageous and yet the whole company can still communicate. Vendors that stress proprietary systems are rejected for those that offer "open systems." Nobody wants to get locked into one specific vendor.

So, there is the dilemma for computer manufacturers. If they build systems that fit in with everyone else, if they adhere to industry standards, then they can be integrated into corporate networks. But, since other manufacturers also adhere to the standards, it is difficult to lock customers into purchasing your specific equipment. Make your equipment unique and you will be shunned by the market; make your equipment generic and anyone can replace you.

So, how does this tie into Atari? Atari's ST line is a unique product. It has many advantages, but it is not mainstream and owners cannot take advantage of mainstream soft-

ware (or mainstream prices of peripherals). Atari computers can not easily be networked with any other kind of computer. If Atari insists on staying unique, it will continue to see a hard road ahead.

But Atari may have a different strategy in mind. At COMDEX, Atari announced (again) the introduction of a line of PC-compatible computers. Atari dealers will now have two kinds of "Ataris" to sell. Atari owners, who may have been thinking of moving to a PC platform, can do so and still be "Atari" owners. The new PCs are very powerful machines. Will they be able to emulate an ST? (Remember Darek's Gemulator that will do just that?)

Another thing Atari announced at COMDEX was a UNIX developer's kit for the TT. The U.S. market has several "mainstreams." UNIX is one of them. That kit offered developers the chance to develop software for the TT that is in conformance with a number of "standards." These standards allow software for the TT to run on other platforms and, similarly, software developed for other machines could be run on the TT. Indeed, a program running on the TT could have the same "look and feel" as one running on your Atari PC.

Imagine in 1992, you run a small business. You have an ST and a Mega. You also purchased one of the new Atari PCs and a TT. All of these machines are linked together in a single network with your TT as a "server." You have an Atari laser and an HP laser on the network and you can print to either from any machine. You can run PC software or ST software or MAC software. You can pass data from one platform to the next. Farfetched? Maybe. Maybe not. Stay tuned.

The **ST Connection**

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The ST Connection is the only publication dedicated to providing news and information on Atari ST public domain and shareware programs.

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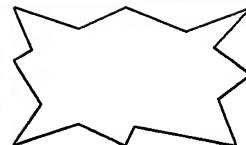
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<input type="checkbox"/> M1 Tank Platoon	\$35.99
<input type="checkbox"/> Metal Mutant	\$34.99
<input type="checkbox"/> Mid Winter I, II	\$39.99
<input type="checkbox"/> Omega	\$32.99
<input type="checkbox"/> Police Quest I or II	\$35.99
<input type="checkbox"/> Populous	\$35.99
<input type="checkbox"/> Project Neptune	\$12.99
<input type="checkbox"/> Railroad Tycoon	\$35.99
<input type="checkbox"/> RBI Baseball II	\$34.99
<input type="checkbox"/> Red Storm Rising	\$32.99
<input type="checkbox"/> Simcity	\$35.99
<input type="checkbox"/> Space Ace	\$35.99
<input type="checkbox"/> Space Quest I, II, or III	\$35.99
<input type="checkbox"/> Space Rogue	\$35.99
<input type="checkbox"/> Turbo Outrun	\$27.99
<input type="checkbox"/> Ultima IV & V	\$39.99

Game Specials
\$9.99

Artic Fox	Night Work
Bally hoo	Obliterator
Black Lamp	Perfect Match
Boulder Dash Const. Kit	Phantasy I, II, III
Captain Fuzz	President Elect
ChronoQuest	Prison
Crash Garret	Project Neptune
Dark Side	Questron II
Demon Winner	Road War 2000
Devon Aire	Rocket Ranger
Dragon's of the Flame	SDI
Final Assault	Sky Fox
Heroes of the Lance	Space Station Oblivion
Hillfar	Terropods
Hollywood Hijinx	The Empire Strikes Back
Infestation	Wargames
King of Chicago	Warship
Murder on the Atlantic	Waterloo

Atari Portfolio & Accessories

<input type="checkbox"/> Atari Portfolio	\$239.99
<input type="checkbox"/> Parallel Interface	\$42.99
<input type="checkbox"/> Serial Interface	\$62.99
<input type="checkbox"/> 32K Ram Memory Card	\$65.99
<input type="checkbox"/> 64K Ram Memory Card	\$91.99
<input type="checkbox"/> 128K Ram Memory Card	\$139.99
<input type="checkbox"/> AC Power Adapter	\$7.99
<input type="checkbox"/> Leather Carrying Case	\$29.99
<input type="checkbox"/> Finance Program	\$59.99

Desktop Publishing

<input type="checkbox"/> Fonts & Borders	\$19.99
<input type="checkbox"/> Dyna Cadd	\$525.00
<input type="checkbox"/> PageStream 2.1	\$159.99
<input type="checkbox"/> PageStream Fonts Disk	\$23.99
<input type="checkbox"/> Calamus	\$159.99
<input type="checkbox"/> Calamus Font Editor	\$59.99
<input type="checkbox"/> Calamus Outline Art	\$159.99
<input type="checkbox"/> Hand Scanner & Touch-Up	\$285.00

Printers

<input type="checkbox"/> Star NX-1000 I	\$139.99
<input type="checkbox"/> Star NX-1020 Rainbow	\$199.99
<input type="checkbox"/> Star NX-2424 Rainbow	\$299.99
<input type="checkbox"/> Panasonic KXP-1181	\$149.99
<input type="checkbox"/> Panasonic KXP-1191	\$189.99
<input type="checkbox"/> Panasonic KXP-1123	\$219.99
<input type="checkbox"/> NEW Panasonic KXP-1124i	\$299.99
<input type="checkbox"/> 32K Buffer for 1181, 1191, & 1124	\$19.99

Letters to the Editor

Super Video Raves

Hello Ben,

Just finished reading Part 2 of the "Super Video" article in *Current Notes*. You have provided your readers and users of the XL with an unusual twist in terms of improving/upgrading the 8-bit, or for that matter, any other computer. Nearly unheard of in my experience, making major improvements by just adding a few things and removing nothing. Nothing like a little alchemy to get something done, is there?

Wishing you good health, continued excess (whoops!) success, and very best wishes, friend Alchemist.

Gary Matteson
Norfolk, NE

Hello Ben,

Well, I haven't used the ol' 8-bit in quite a while, but after reading about your Super Video mod in *Current Notes*, I just had to try it (I always love a good hardware mod). I put it together

and it works great! I just had to write to say "Good Job" on the articles and info. They were the best set of mod instructions I have followed yet! (And I've read quite a few.) Nice sharp diagrams and pictures. Keep up the good work.

Now that my 8-bit is back in the limelight, I'm thinking about adding memory to it.

Bill Hutchison
Green Bay, WI

Dear Alchemist,

I'm a longtime 8-bit Atarian and have subscribed to *Current Notes* for several years now. I was about to let my subscription expire when you became the 8-bit editor. Your writing changed my mind, and I renewed my subscription. Since then I have enjoyed reading every one of your articles. Before that, the only items I looked forward to reading were the 8-bit reviews, "Small Miracles," and occasionally "Small World." It's renewal time again, and I intend to extend my subscription for

two more years, hoping that you continue your interesting articles.

I'm looking forward to your rebuild of the Type I Atari power supply as hinted at in the November 1990 issue. I hope it can deliver at least 1500mA because I have a hardware project in the works that may need it. I also wanted to express my interest in an appendix to the XE and Taiwan XL computers, as these are the very machines I have. Thank you and keep up the great work.

Jim Thompson
San Diego, CA

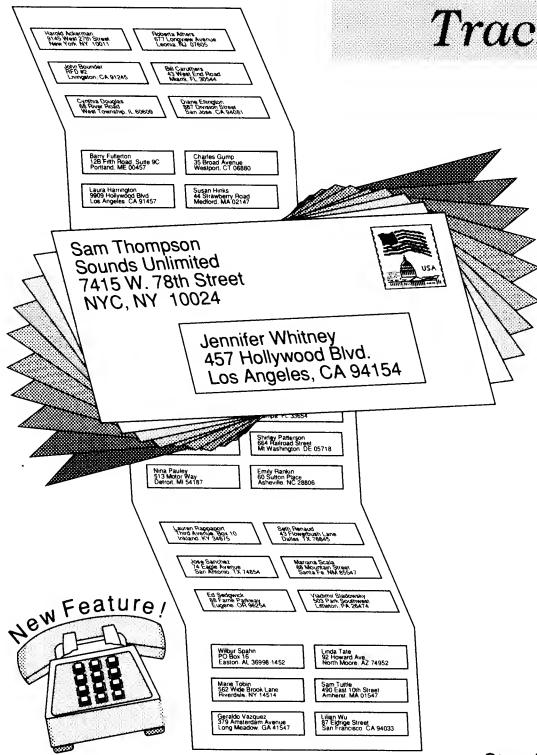
The Alchemist Responds:

With reviews like these I feel like a heel for departing *CN*, but under the circumstances I just have no other choice. After a fire on November 3, my house was trashed, and reconstruction is an all-consuming priority.

At least Fate granted me enough time to make good my promise to rebuild the Type I supply. Savor the November/December issues for the Squeezed Queen, Jim. And yes, my Type I supply rebuild delivers more than enough juice for your requirements: a solid 2000mA.

Beat the Price Increase!

Tracker/ST v3.0 at the old v2.0 price.



Fight inflation. Get a great deal. More for your money. Save a few bucks. However you put it, this special offer for Tracker/ST version 3.0 is a true bargain. You get the brand new release of Atari's leading mailing list and mail merge program, for the old price of only \$79.95. And that's list price we're talking. On January 1st, the price rises to \$99.95.

Of course, even at \$99.95, Tracker/ST is a steal. Its advanced new features include a duplicate name warning system (no more accidental duplicates in your mailing lists), telephone dialing, the ability to move names between two open mailing list files, unlimited filtering (for super-targeted form letters, labels, and reports), and more. Plus, all the original features that have made Tracker/ST the obvious choice in mailing list software: Super-easy setup (just load-and-go), up to 9-across mailing labels, full support for all laser printers, the DeskJet and the BubbleJet, the ability to store an unlimited number of names, the world's easiest mail merge system, and on, and on...

So hurry, and get Tracker/ST v3.0 at the v2.0 price. This special offer ends on December 31st, 1991.

Step Ahead Software • 496-A Hudson Street, #F39 • New York, NY 10014 • 212-627-5830

I've had many inquiries on Super Video for the other 8-bits: 600XL, Taiwan 800XL, and XE machines. I'm grateful to Rich Link for pointing out to me that direct video output in the 600XL was deleted during production, although the board is screened for the same video output design as the 800XL. That opens the possibility of building direct video output into a 600XL from scratch, with all the correct value components and no compromises (a delicious thought!). At the WAACE Fest in October, I had the opportunity to make an A/B comparison of a Super Video 800XL vs. a stock XE and confirmed my suspicions that the XE could indeed be improved, though not as dramatically as the XL.

The spirit of The Alchemist is willing to tackle these projects and present the fruits of research to the faithful. However, I'm afraid there are two major impediments. First, I don't own a Taiwan 800XL, a 600XL or a 130XE and can't justify the expense of purchasing them. Second, I anticipate a

minimum of six months before my home, and my life, are back to normal.

Ben Poehland
Frazer, PA

pc ditto on an S_Te

Dear Editor,

This is a follow-up letter to the one published in the October issue of *Current Notes*. I had a question as to how to get *pc ditto* I to run on an S_Te. The machine informed me that the software would not run on a foreign machine. Quite by accident, I discovered that *pc ditto* WILL run. Remove any AUTO folders from your *pc ditto* disk. Then use the auto run feature of 1.4. Pick *pc ditto* program, install application from menu, choose AUTO and save desktop. This works, though I could not tell you why. It works for floppy disk; I don't know about a hard drive. It seems that *pc ditto* runs just the slightest bit faster on an S_Te, but that may just be my perception of things.

I hope that this is a help to others who may use *pc ditto* on occasion.

This solution may work for other programs that will not run from an AUTO folder.

Donald Proctor
High Point, NC

Dear Joe,

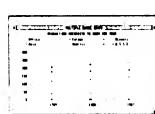
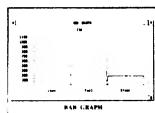
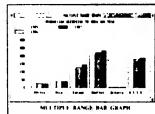
In response to the letter from Donald Proctor, High Point, NC: I have found that deleting, or making the command line a remark instead, the command line PCDSETTD from my autoexec.bat file will allow my 1040S_Te with 4Mb to run *pc ditto* I just fine (so far). I also deleted (commented out) my following "ASSIGN A=F B=G" command at the same time. It appears the drives are still seen as originally set anyway. (Drive C: is the primary hard drive and A & B the two floppies.) So, perhaps the setup instructions in the *pc ditto* manual can be ignored somewhat. Hope this helps Mr. Proctor.

By the way, I'm a new subscriber to *Current Notes*, but not a new reader. I finally got around to obtaining an excellent mag the easy way.

Daniel McAndrew
Bel Air, MD

3D-CALC SPREADSHEET

By Frank Schoonjans



3D-CALC is a true 3-dimensional spreadsheet with an integrated editor and programming language, graphics and extended statistical functions.

The main features of the program are:

- ★ 3 Dimensional - 13 Pages x 2048 rows x 256 columns.
- ★ 3 Spreadsheets simultaneously in memory, 3 windows can be opened per spreadsheet.
- ★ Works in Mono or Colour in high or medium resolutions.
- ★ Full version requires 1 Meg. of memory but includes a reduced feature version to run on a 520 ST with only half a Meg. of memory.
- ★ Integrated text module with data export from the spreadsheet allowing formatted data output, mail-merge, label printing etc.
- ★ Integrated 3D-CALC programming language accepts input from a terminal.
- ★ Graphics module includes bar and line diagrams, pie chart, multiple bar and line graphs, stacked bar graphs, function graph etc.
- ★ TT Compatible.

- ★ Enhanced statistical analysis including averages and distribution parameters, scatter diagram with best fitting curve, regression and correlation, T-tests, Wilcoxon tests etc.
- ★ Extended database functions
- ★ Includes 3D-CALC spreadsheet accessory and text accessory.
- ★ Easy to use intuitive GEM interface.
- ★ Reads Michtrons Personal Finance Manager and PFM Plus files into a 3-Dimensional Spreadsheet with each account written onto a different page and the first page summarizing all accounts.
- ★ Reads Ascii and Lotus 1-2-3 files.
- ★ Includes file format description to allow users to integrate spreadsheet data into their own programs.

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HANDS ON IN CHICAGO, LYNX A LOT, AND THE MYSTERY OF THE MMU'S & GLU'S

"Door Prize: Take your pick. A Mega S7e & an SLM 804 laser printer, or...."

Looking Ahead

How would you like to go to a fashion show and while you were there be taught how to model clothes. That would be novel, no? Well, at the Chicago ComputerFest by Atari on November 23rd and 24th, we understand something like that was scheduled to happen, in a computer framework, that is, not actually changing your clothes. In addition to some intriguing seminars and demo's on advanced DTP products like Retouche Pro, and Seurat, and Arabesque Professional, plus scads of Midi seminars, and Bob Schuricht, head of Atari National Sales, showing off the latest Lynx games (see below), there were to be "training seminars." On Saturday and Sunday you could learn either to be a pro in PageStream or a magician in Calamus. Mario Georgiou, in a total of five hours, made all the wonders of Calamus yours; or Dan Weiss did the same for PageStream. At a fee of roughly \$6 an hour, that might not be a bad investment. Earlier we noted we'd spent over a year exploring and using Calamus and were still far from there.

Making Products Better

Derrick Hall runs Spar System, and not only runs it well but also very much to the benefit of all Calamus and PageStream users. Recently, we did a piece on his CalAssistant, the always there accessory that takes much of the voodoo out of the heavily layered Calamus icons. Not content with letting the product soar of its own high degree of usefulness, he had upgraded it (Version 1.32F). Soon we will provide you with a review of his latest product, PageAssistant, an accessory to get users of PageStream 2.1 into the mainstream of productivity. Let us merely note that the fifty-odd page booklet that comes with PageAssistant is as cogently and tightly written as any piece of documentation we have read. (Expect to read some snidery in the next Junkyard Pussycat column about our track record on reading documentation, to which we admit we are usually allergic.) \$49.95, SparSystems, 381 Autumn Avenue, Brooklyn, New York 11208, Phone (718)235-3169.

Lynxing It for Xmas

The only Atari product that you see advertised in your local newspaper, if you have a Toys-R-Us, Kay Bee Toys, or Electronic Boutique in your area, is the Lynx hand-held game machine. The rest of Atari might well pay attention to the marketing team behind the Lynx. The Entertainment Division apparently recognized that marketing and public relations has been around a long time and there are pro's out there. Enter Edelman Public Relations Firm and their Atari Account Executive Tom Crosby. There it starts and where it stops only the figures from Christmas sales will tell you. In addi-

tion to trying to convince readers of its PR releases, stating that three times as many people "intend" to buy Lynx's as Nintendo Game Boys, they underline the fact that of the top five selling video games in this country, Atari's *Warbird's* is number five! Why? Because per *GamePro* magazine, "its extremely detailed graphics and astounding and realistic flight simulation will knock you out." Having played it for a couple of hours, we tend to concur; it's a fine simulation.

But it doesn't stop there. *Electronic Gaming Monthly* has given its first Gold Star Award to Atari for the Lynx's *Ninja Gaiden*, the martial arts action game. To the charge that Sega and Nintendo have scores of games to play and Atari only a few, the PR firm notes that there are 20 games for the Lynx out there now and by Christmas there will be 30 more. The new ones, already here, include *Turbo Sub*, an underwater shoot 'em up, *Scrapyard Dog*, just what it sounds like, and *Checkered Flag*, a multi-player racing game. On the horizon are *Baseball*, *Krazy Ace Miniature Golf*, *Qix*, *Golf Challenge*, and *The Fidelity Ultimate Chess Challenge*. It will merit watching to see how many of the 30 new games make it to the Christmas market. But at a minimum, here is a product that defies the standard Atari approach to selling their computers. There is advertising, there is promotion, there is distribution, and there is plenty of product. One or more of these always seems to be missing when you talk about TT's and Mega STe's, etc.

The Return of the Maestro

Sig Hartman is back. Not that he was ever gone. But he's back in the immediate world of Atari, having taken up a management position at Gold Leaf. Gold Leaf is thought of as the successor to Blue Chip Technologies that filed bankruptcy a couple of years ago. They are the developers of *WordFlair* and, most recently, a host of DTP (Direct to Press) European products. Atari, U.S. has not fared well since Sig retired. We hope his presence on the ST/TT scene will bode well, both for Gold Leaf and Atari loyalists.

Atari Dressed in Big Blue, Plus TT's & Notebooks

As observers at Comdex noted, once again Atari is making a move into the MS-Dos, IBM compatible market. (See the Publisher's editorial.) Their 386 machine is slated for delivery at dealers in mid-January. Since it is not manufactured by Atari, and they merely put their label on it, the deadline may indeed be met. The Atari 386 is price competitive and could be a seller. We hope so. The more money in the Atari till, the better are our chances for new machines.

The bigger question, however, would seem to be the delivery date for the ST Notebook. Sam Tramiel has said Atari will flood the market with them. The

hope is that the deluge will take place soon, while the interest is still peaking. If the delay extends into the second quarter of 1992, which it well could, the chances of it being a big seller are obviously considerably reduced. A few TT's are showing up at dealers, a trickle not a torrent, and the old version. Dealers maintain that if they had a lot of them they could sell them. We suspect "a lot" may not happen until the new version hits the street, which we estimate will not be until February of next year.

Beau Geste

Not the book about soldiers of fortune. Not the movie about the book about soldiers in The French Foreign Legion. But rather Atari's "beau geste," their goodwill gesture to WAACE and Theodore Martens of Edgewater, Maryland, the winner of the Atari door prize. Martens was offered his choice of a STacey II or a Mega STe 2-50 (with 2 meg of memory and a 50 meg hard drive), plus an SLM 804 laser printer. We are informed that in a wink of an eye he opted for the Mega STe package. A fine door prize. Well done, Atari.

Coming Un-GLUed?

We tend to be quick to highlight incompetence at Atari, lack of compatibility and delay in product delivery; that's in addition to not selling the product well. But our patience is a bit better when we explore some of the problems confronting the manufacturer of a new computer. What causes such sympathy for Atari? Merely a quick look at their current shortage of MMU and GLU chips for use in repairing 520 and 1040 ST's. Some dealers around the country report a couple of dozen Atari ST's stacked up in the backroom, awaiting repair, i.e. availability of MMU chips especially. Other dealers are buying old 520's that don't work for \$50 just to get the MMU chip to use in repairing somebody else's machine. Why the shortage? Because the MMU and GLU chips for the Mega ST's and the Mega STe's and the 1040 STe's don't work on the earlier machine. The .IMP chip, as it is referred to technically, was manufactured for the latest computers, and who would know that it wouldn't also work in the old machines. It would be nice to find someone to blame, but in this instance it would be hard to. Oh, one last note. If you have a 1040 ST with one meg of memory and your MMU is bad, the new chip will work in it, as long as you don't try to upgrade to 2 meg of memory. Life is simple, isn't it?



STBook Notebook PC

Three New 386 PCs

UNIX Developer's Kit

New STBook Notebook PC

Atari today announced the STBook™, a new ultralight notebook computer for mobile professionals. The STBook is a highly portable machine that can run application software designed for the company's popular ST line of desktop computers. The STBook will be shown for the first time at the Comdex trade show on October 21-25 in Las Vegas.

"The STBook is a direct response to customer demand. Our user base asked for a notebook-sized machine to support their ST software when they travel," said Sam Tramiel, Atari Corporation CEO. "We think they'll be very pleased with the power we've packed into this highly portable machine. And, in keeping with our corporate philosophy of providing the best value, the STBook will be launched at a suggested retail price of \$1,995."

The STBook measures in at 8.5" by 11" by 1.4" and weighs only 4.3 pounds. The STBook is based on the 8 MHz Motorola CMOS 68000 chip and uses a 32-bit internal data bus that runs at a speedy 16 MHz. The STBook is configured with one megabyte of low power pseudo-static RAM. A 40 MB internal hard disk drive is included. The drive features a quick 19 ms average access time. Optional hard disk drives with 60, 80, or 100 MB capacities are available. The system uses 512K of built-in ROM, and features a BLITTER™ graphics co-processor. The CMOS 68000 processor, when coupled with a proprietary Atari chip set, provides superior performance and maintains longer battery life when compared to competitive 286- or 386-based notebook computers.

The 8" by 5" monochrome liquid crystal display screen uses reflective film-compensated super twist nematic (STN) technology to display crisp graphics in 640 x 400 resolution (ST High Resolution mode). A Programmable Sound Generator with three voices is also standard equipment.

The STBook uses a keyboard with 84 alphanumeric keys, 10 function keys, and 4 cursor keys. A built-in Atari VectorPad™ offers pressure sensitive cursor control using Force Sensing Resistor technology. A backplane connector enables the user to attach a standard Atari keyboard.

The battery life is 10 hours, and the "Delta-V" high-speed recharging system enables a reliable full recharge in less than two hours, even if the STBook is operating. A battery pack that accommodates seven "AA" alkaline batteries comes standard. A rechargeable NiCad battery pack with AC adapter is optional. Further, the STBook includes a "wake and sleep" mode and state-of-the-art power saving energy management system.

The STBook has some other useful advantages over other notebook-style computers. Its TOS operating system is contained in ROM for speedy operation and efficient memory utilization. Calculator, diary/calendar, and address book applications are built-in. The operating system uses a hierarchical file system with pathnames and subdirectories. The graphic user interface is icon-based and includes self-explanatory command functions, windowing, and drop-down menus. The system's NewDesk™ desktop and Control Panel are user-configurable with advanced file management functions.

The STBook comes standard with an RS-232 serial port, a parallel port, a floppy disk/ACSI port (used to connect to external floppy disk, hard disk, or CD-ROM drives, or laser printers), and MIDI in/MIDI out ports.

"The STBook will be especially desirable to the music market where its portability and unique built-in MIDI port will be highly attractive," said Tramiel. "No other notebook style computer comes with a built-in MIDI port, nor can they accommodate a MIDI expansion board."

Optional peripherals include a 3.5" high density floppy disk drive, an internal fax/data modem, and various third party accessories such as a MIDI/SMPTE adapter which will be available in the first quarter of 1992.

The Atari STBook will ship by the first quarter of 1992 and be available through a wide network of Atari dealers and resellers.

386 Desktop and Notebook PCs

Atari announced today the launch of three new 386-based computers. Atari is introducing two desktop models and one notebook computer. The Atari ABC386SXII is a 20 MHz 80386SX™-based desktop system. The Atari ABC386DXII is a desktop system based on the 40 MHz AM386TM processor chip. The Atari ABCN386SX notebook computer is powered by a 20 MHz 80386SX and weighs less than 6 pounds. The three new machines combine very powerful hardware with the wide range of traditional MS-DOS application software.

"These new machines offer the best performance and value in the PC marketplace," said Sam Tramiel, Atari Corporation CEO. "We believe that the speed and power of these systems combine with an aggressive pricing

philosophy and our commitment to product quality and reliability to provide our customers with the best overall computing solution."

The Atari ABC386SXII (SX) is a desktop system that comes equipped with a 10 MHz 80386SX processor, 1 MB of RAM, a fast 40 MB hard drive (average access time is 17 ms), and two 8-bit and four 16-bit ISA (Industry Standard Architecture) expansion slots. Up to 8 MB of RAM can be installed on the system's motherboard. An Intel 80387SX floating point math coprocessor is optional. The SX uses an industry standard Phoenix BIOS and comes with a Super VGA video adapter that displays at a resolution of 800x600. The Atari SX carried a suggested retail price of \$1,195.

The Atari ABC386DXII (DX) is a high-powered desktop computing platform that uses a 40 MHz AM386 processor from Advanced Micro Devices, 2 MB of RAM, a fast 80 MB hard drive (average access time is 17 ms), and eight 16-bit expansion slots (plus one 32-bit slot for RAM expansion). Up to 64 MB of RAM can be installed on the system's motherboard. The system comes with 64K of Cache RAM, which is expandable up to 256K. An Intel 80387 or Weitek 3167 floating point math coprocessor is optional. The DX uses an industry standard BIOS by AMI and comes with a Super VGA video adapter that displays at a resolution of 1024 x 768. The Atari DX carries a suggested retail price of \$1,995.

Both desktop systems use a small footprint "minicase" chassis, with a 200 watt power supply, a 3.5" 1.44 MB floppy drive, three 5.25" drive expansion slots, a 101 key enhanced AT style keyboard, one parallel and two serial ports, and a game/joystick port. Both desktop units come standard with both *MS-DOS 5.0* and *Microsoft Windows 3.0*.

The Atari ABCN386SX (N386) provides the power of a desktop system in a convenient notebook size. It uses a 20 MHz Intel 80386SX processor and a AMI BIOS. It comes with 1 MB of RAM, a fast (19 ms average access time) hard disk drive and an internal 3.5" 1.44MB floppy drive. Up

to 4 MB of RAM can be installed as options, bringing the maximum installed RAM to 5 MB. An optional 60 MB hard disk is available. The N386 features a 20 MHz bus speed, almost three times faster than most competitors. The built-in 8" x 5" screen displays bright crisp 16-level grayscale images. The keyboard features 85 keys, 10 function keys, and four cursor control keys with standard, full-size spacing between the keys. A numeric keypad is optional. MS-DOS 5.0 and Windows 3.0 comes standard with the N386. The N386 is packaged in an extremely convenient and portable format: the 5.9 pound system measures 8.3" by 11.5" and is 1.5" thick. The battery will last 1.5 hours before needing a recharge, and will recharge in 1.5 hours if the unit is off and 8 hours if the unit is on.

The Atari N386 carries a suggested retail price of \$2,895. These systems will be available in the first quarter of 1992.

Unix SVR4 Developer's Kit

Atari announced today the development and imminent availability of the Atari System V (ASV) Developer's Kit. The Developer's Kit is available to selected software developers interested in creating new or porting existing applications onto the powerful, low-cost Atari TT030™ personal workstation.

The ASV Developer's Kit contains a rich set of developer's tools conforming to a wide range of industry standards based on Atari's implementation of UNIX System V Release 4.0—for the Motorola 68000 series processors and Atari's workstation graphical user interface. The interface is based on the hardware—and operating system-independent X Window system standard and the Open Systems Foundation (OSF)/Motif style. Thus, ASV applications take on a sculptured three dimensional Presentation Manager™-like appearance. The Atari Style Guide is an enhancement to the Motif style that sets standards for consistency among ASV applications.

"The tools that comprise this developer's kit will help key software vendors to efficiently port their appli-

cations to ASV and take advantage of the most cost-effective UNIX workstation platform, our TT030," said Sam Tramiel. "We're excited about the value that these applications will add to the TT030 and about providing the UNIX workstation market with a low-cost, high powered platform."

The Developer's Kit has three main tool groups (core tools, graphic user interface tools, and language compilers and debuggers) and one group of tools for networking services. The core tools include AT&T System V Release 4.0, BSD and XENIX Convergence, Virtual File Systems, Virtual Memory Management, User-Controlled Process Scheduler, Device Driver Interface/Device Kernel Interface, Internationalization, and Extensible Linking Format (ELF).

The Graphic User Interface tools include X Window System Release 11.4, Motif User Interface, XFaceMaker2, and the WISh2 Desktop Manager. ASV application designers can quickly create a Motif-compliant interface by using XFaceMaker2 to paint an application screen from a palette of Motif objects such as labels, push buttons, scroll bars, and message boxes. With FACE, a built-in C-like language, the designer can mold the behavior of the interface.

The programming tools include the efficient GNU C and C++ compilers and the GNU gdb debugger as well as the AT&T System V sdb debugger. The C compiler is fully compatible with the System V ELF object format and with the ANSI C Issue 5 extensions. The tools and styles in the ASV kit assures the developer of compatibility, portability, and interoperability with other workstation vendors conforming to an open systems architecture and such industry standards as POSIX™, X/OPEN, XPG3, FIPS, NFS™, X Window System, and Motif.

The networking package adds the Network File System (NFS), Remote File Sharing (RFS), TCP/IP (the DARPA protocols) and BSD Sockets.

The Atari System V Developer's Kit will be available in general release form in the first quarter of 1992.



Atari at COMDEX '91

The Emperor's New Clothes

by Bill Yerger



If there is one thing Atari knows how to do it is to put on a class act at a computer show. Stationed just to the left of the entrance of the Sands Convention Center, Atari had a booth a little bigger than Apple's over in the Las Vegas Convention Center. With 25 or more computer stations, Atari had plenty of room for selected developers to demonstrate and discuss their programs. But, as we will see, Atari isn't converting the masses; Atari is preaching to the faithful.

The Goldleaf Alliance

I was able to spend only one afternoon in Atari-land, but an interesting afternoon it was. Probably the most noticeable thing about the Atari booth was their alliance with Goldleaf. At least 20% of the workstations were occupied by Lauren Flannagin-Sellers and her staff. Atari is solidly behind her efforts to create a broad distributorship in this country. In fact, our old friend and ex-Atari vice-president, Sig Hartmann, is now one of the principals at Goldleaf.

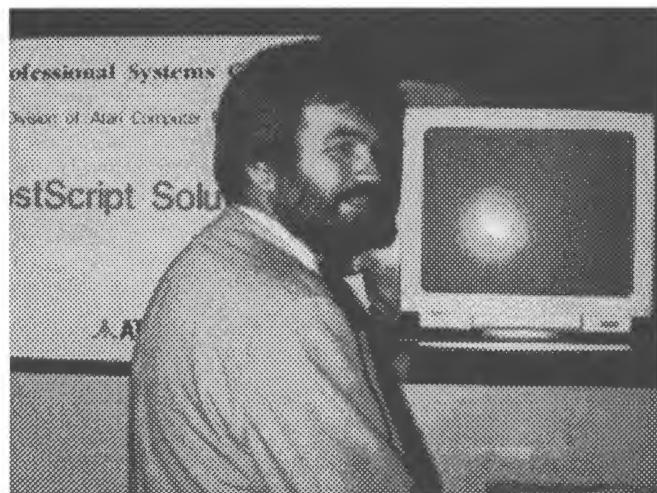
In addition to *WordFlair*, Goldleaf is selling 3K's products in the U.S., which consist of *Retouche* for \$1,000 and *Retouche Professional* for \$1,500, *Sherlook Professional* (optical character recognition software) for \$800, their own Imagesetter version of the Hell Ul-tresetter for \$40,000, and the, as yet unreleased, *Didot*

LineArt program for about \$1,200-\$1,500. The latter combines the features of *Calamus* and *Outline Art* in one program with Postscript output using modified *Calamus* fonts. Regrettably, the human interface of *Didot LineArt* is probably one step worse than *Calamus*. This reflects the German penchant for iconizing everything with shorthand symbols. Too often these symbols are a bit too cryptic for Americans. At this time, *Wordflair II* is pretty overshadowed by the products imported by Goldleaf. That may change as time goes on. Especially if Atari keeps its promise to have the new scalable font GDOS on dealer's shelves "by the time you read this."

The product lineup available from Goldleaf is interesting, and growing. Probably their greatest coup currently is having the right to resell Theo Breuer's COMPO software. The first product we will see is *That's Write II*, which should probably retail for around \$200 or more. This is an interesting word processor that uses Postscript fonts with graphics, contains a dictionary, and does footnotes and columns. This is one of the most impressive word processors I have seen for the Atari line; it could even win a few Macophiles back from their Spectre's. I use *First Word Plus* and import my text into *Calamus* or *Pagestream* for final output, but I might not have chosen this method if *That's Write II* were available on the ST.

Although *That's Write II* uses preset font sizes rather than fully scalable fonts such as a good desktop publishing program uses, for many of us, it will produce the kind of document that we want others to receive. It is fast and easy to use. If you have used *Script*, it will seem more familiar than if you have been a *First Word* user.

Theo Breuers intends to advertise toward the existing Atari base of computer owners. Who knows, we might see some promos like we do from Borland, i.e. send in the front page of your manual and get the program for xx% off. Theo says he went with Goldleaf because of the other four or five potential American distributors, Goldleaf seemed to have enough financing, and was small enough to provide support.



Goldleaf is also distributing Hi-Soft's line of programming languages, *Tempus* the programming editor from Creative Computer Design, and Lattice's programming languages. When you call them you usually get a message person, but they do return calls. One of my customers has been waiting for a special order of *Forth* for his TT since June and it looks like it may not come at all. However, they do have *Lattice C* and *Hisoft Basic* for the TT right now.

PageStream 2.01

Marc Wurzel, the marketing director of *Page-stream* was on hand to demonstrate version 2.01. This is a really fine application and I feel that every Atarian who wants to do desktop publishing should have this program. For one thing, it produces absolutely the highest quality output on the ST/TT. The Adobe Type 1 typefaces with hint technology are superior typography to anything yet seen.

A lot of people seem to find it difficult to set up the new *Pagestream*, and this is to be expected. *Page-stream* 2.xx is radically different from *Page-stream* 1.xx, but it doesn't look different. The differences are on a more subtle level, such as font handling, on screen and to the printer. Color screen reproduction on the TT and separations for laser through Lino output are par for the course. And now with Compugraphic and Adobe type support, all of the elements are in place for a program which is second to none on any computer.

The only criticisms of *Pagestream* are difficulty of installation, and mediocre support. It is difficult to get through to Softlogic's support crew and one often gets misleading answers. Several weeks ago I called and asked if *Pagestream* 2.1 can separate colors and print each out as a black image. I was told that this feature was not implemented and it was not clear when it would be implemented for bit images (i.e. TIFF or .IMG). Since I had bought a color scanner just to do this, and had spent seven hours trying, I found this a bit disturbing. Marc assured me this was not the case



and I need only get a more updated Postscript driver. So far I still have not been able to ascertain what the real story is on color separations because I have not gotten through to support.

Then, I sold a Mega 2 STE with *Pagestream* to a customer and spent three hours trying to install it. I don't know why, as the instructions don't mention this, but until I created an extra path to FONTS in the set path option, any typed letters would not advance the cursor but continue typing in one space. An installation program, such as all IBM programs have, would simplify this. But, no one is perfect, and *Pagestream* from Softlogic definitely deserves an "A" for excellence.

Calamus SL

The new *Calamus* also deserves an "A" for excellence. In many ways *Pagestream* and *Calamus* overlap in capabilities. Where they really differ is in the approach of their programmers. Both, being desktop publishing programs, mix graphics and text on screen with columns, fonts and some graphics control.

Calamus SL was designed not to industry standards but rather to take full advantage of Atari capabilities. This means greater output speed and closer to 100% what you see is what you get (WYSIWYG). The new *Calamus* is itself a module which can include other modules so that companion programs can run within it without leaving *Calamus*. For example, you can scan in a picture, edit it with the soon to be released *TMS Cranach* (distributed by ISD as is *Calamus* in North America), place it within a frame, edit a text file in one of several text editors, place that in frames, surround your picture, choose fonts and sizes for various parts of your text, and print out in color or black and white to paper or film in various resolutions up to 3000 dots per inch.

On the downside, because *Calamus* is a German program, it has taken almost a year to translate the manual and resource code. As a result of this, the two new versions *Calamus S*, estimated cost \$300-\$500, and *Calamus SL*, estimated cost \$800-\$1,000, are not released in North America. Nathan Potechin says the new manual is finally en route to the printer, which implies a pre-Christmas release.

As a desktop publishing fan, I suggest that you own the latest version of *Calamus* for your machine as well as *Pagestream*. There are times when each has advantages over the other. *Calamus 1.09n* has become my favorite word processor for short documents. For a long document, I use *Wordplus*, which also imports well to *Calamus* or *Pagestream*. *Pagestream* has a certain flexibility not available in *Calamus*, as well as slightly better looking fonts (they are Adobe Type 1 with hints as well as Compugraphic), but the output from *Calamus* is so reliable and fast that I can achieve that ideal of a perfectly edited document much faster.

Whichever way you go, there can be no doubt that these two heavyweights are excellent weapons in your arsenal when someone says, "Atari? What's that, a game machine?"

Publisher ST/TT

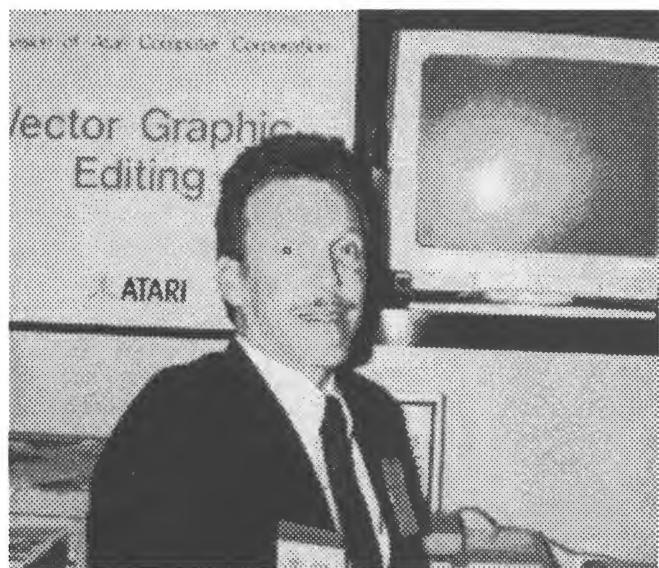
Incidentally, Timeworks told me at the show that they are currently negotiating with GST for the right to distribute *Publisher ST/TT* 2, utilising FSM GDOS and Postscript fonts, with more flexibility than the version now available, including importation of more file formats and ability to install new fonts.

Although I clearly prefer *Calamus* and *Pagestream* most of the time, there are certain things *Publisher* does, such as dot leaders, that I find extremely valuable. If they just allowed lines to be drawn without frames, handled large documents easily, cut graphics without retaining the whole graphic in memory, and allowed manual insertion and tweaking of printer drivers and fonts. Hey, that's almost a whole new program. Well, maybe 2.0 will do it.

Avant Vector

John Eidsvoog of Codehead was holding down a chair and demonstrating *Avant Vector* from Trade-it in Germany. *Avant Vector* costs \$500 and up (\$400 more for the professional version which includes plotting). Personally, I find this to be an excellent vectorization program, although I think dedicated plotter programs, such as *GMA Plot*, produce more flexible plotter output.

You are probably asking yourself, "Why do I need a vectorization program?" Well, if you have ever scanned in a logo and then spent three hours using *Touch-Up* trying to clean up those little dots on the edges of the logo or letters, then you would appreciate the five or ten minutes of smoothing done by *Avant Vector*. What's more, it does a better job than you or I would in magnification mode.



Once a scanned image is vectorized it can be saved as a CVG file that can be used in *Outline Art* (ISD) or *Calamus*, or saved as GEM object, or, if you pay \$50 extra, as an EPS, which will show on the screen in *Pagestream* just as a CVG will in *Calamus*.

The point is, of course, that this vectorized image is more perfect than another scanned image. Plus, once vectorized, the image can be edited by manipulating little squares in magnified mode to move the outline of the vector image with bezier curves.

John also had a pre-release version of *MIDI-Spy*, the Codehead's MIDI accessory that lets you play a little rhythm or tune in from your synthesizer keyboard from any GEM application. Then, you can preserve a tune for posterity, before you lose the sense of it, by saving, exiting, and starting a new program. Now if they could just write an accessory that will let us preserve our dreams before they slip away!

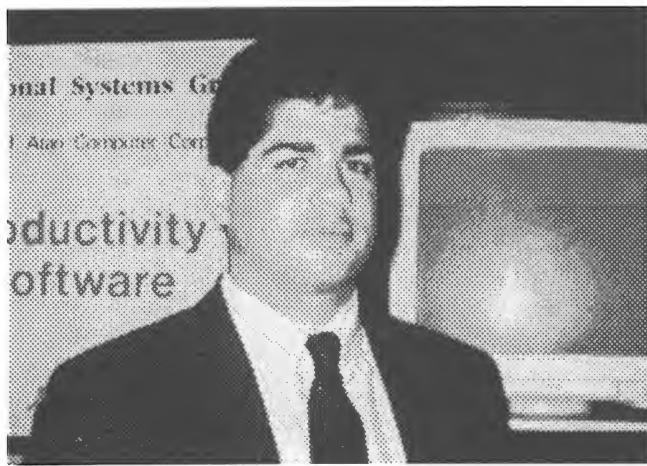
Portfolio

Of course, Atari feels they've already done that, and it is called the Portfolio. Contrary to some rumors, the Portfolio probably won't be upgraded to a new model. It is unlikely that it will become a '286 or have a larger screen. Basically, the Portfolio is fairly expandable as it is. Megabytes of Texas can upgrade it to 512k. A hard disk can be utilized right now using the parallel port. It can talk to virtually any machine on the market. In fact, the Portfolio is a very nice niche product.

Don Thomas, who works for Atari and also produces a file transport program so the Portfolio can talk to the ST, was smiling and promoting the Portfolio. It seems there are now several magazines which feature the Portfolio. First, there is *APB* (Accessories, Peripherals, Bulletin.) This is really a catalog published by Atari and edited by Don Thomas. Second, *Perfection Applied*, a nondenominational newsletter for palmtop users [454 W. 1010 North, Orem, Utah 84057 (801)22-0120]. Finally, there's Don's favorite, *RE:PORT*, a Portfolio only publication [1618 S. Beech Court, Broken Arrow, Oklahoma, (918) 258-2062].

Arabesque

Rick Flashman of Gribnif was also at Comdex this year. Surprisingly, he was not showing *Neodesk*. Rick is also importing software from Germany and was showing *Arabesque*, an Atari art program similar in function to *Superpaint*. I was glad to see it worked on the Moniterm/SM194 monitor. *Megapaint II* works only with a special driver on the big screen, and this driver seems to be pretty unobtainable in the U.S. This is why we need companies like Gribnif, Codehead, Rimick, Zephyr, and Goldeleaf. Someone local must support imported programs or the user is simply left hanging when something doesn't work.



Arabesque is a very interesting paint program, and I expect it to be priced reasonably at about \$100. *Vernissage* is probably the most capable paint program to be offered on the ST/TT. It is likely to be priced at \$500 or more, and I expect it will be sold by Goldleaf/Compo.

ConVector

Gribnif will also be releasing *ConVector*, which will compete with *Avant Vector*. It does cost less but seems to have fewer features for conversions from bit map to object (vector) art. *Arabesque* may make it to market before Christmas, but *Convector* will be released in the first quarter of 1991.

Prism Paint

Lee Seiler from Lexicor was displaying *Prism Paint* and other Phase 4 companion programs. *Prism Paint* works in all resolutions and can address 256 colors. It really seems like a more modern *Degas* with similar tools. The basic difference is that it handles TT resolutions and other monitors. It's my understanding that it also supports other video cards.

Phase 4 is a graphics and animation system developed and marketed by a conglomerate headed by Lee Seiler. Lee is basically an artist, sort of an outer space Big Daddy Roth, who likes to draw intricate space robots and creatures. The others in the conglomerate formerly marketed their wares to *Antic/Start* (*Start* ceased publication earlier this year). I sold Lee his first Atari a couple of years ago when he came in looking for a good animation system. The people at Lexicor seem to have put together a very comprehensive package.

ViewTouch

DP Computer Specialties and Computer Productions demonstrated their new *ViewTouch* system for automated Point of Sale (POS) with cash register, but with no keyboard necessary. No keyboard? Yes, that's right, everything is applicable from the screen. Atari is not the only computer that can do this, but it is one of

the friendliest, fastest, and most powerful units on the market.

I asked Dan and Jerry what they felt about the entry of Atari into this market, since Gene Mosher with a similar product has been plugging away for several years. The prognosis with Atari is not good. The fact is that Atari could equal their national sales for 1991 in just this niche alone if they could supply the computers. But they can't.

So this is a very nice setup and the Atari system can be used to make a salesman a nice profit for four or five computers with a laser printer. However, to get the good contracts, one has to be ready and able to supply 15,000 if necessary. Who is going to spend the time marketing and selling a POS system when Kentucky Fried Chicken or Domino Pizza or similar outfits laugh in your face when they are told they might be able to get 10 Mega STE's next month?

The Hotz Box

Jimmy Hotz had his portable *Hotz Box* running on a Stacy in the fifth of Atari's booth dedicated to MIDI. He was also running *Notator* and had some pretty nice sounds coming out of his equipment.

I've met Jimmy several times before and you may have read of him in *Start* and several music magazines. His enthusiasm is contagious. It turns out that Atari is no longer planning on producing the *Hotz Box* synthesizer controller, so Jimmy has developed a software only version that should hit the market pretty soon. He is also custom building *Hotz Boxes* for select



customers at about \$5,000. He has to like you to be willing to invest the time building one though, so don't call him up and say Bill Yerger said he would do one for you.

I asked Jimmy what is so special about his system. He was almost overwhelmed because there is so much that is incredible about the *Hotz Box*. For one thing there are hundreds of thousands of potential scales.

Many musicians spend years learning 500 scales. His *Hotz Box* software contains almost all potential scales, and one can select from most of the popular potential chord scales immediately.

Secondly, his software synchronizes itself with the scale that is digitally loaded into the computer either via software or from a digital source such as a CD. That means that you or I, with little or no training, can make music on a synthesizer right away and it is in harmony and in tune. Does this mean that untrained musicians will replace real musicians who have training and talent? No, but it does mean that a musician can begin to have the power available that a writer with an on-line thesaurus, dictionary, and rules of style has, and that many of the simpler corrections can be done automatically. It means that music from a talented musician can sound fuller and better more quickly.

Cubase and Band in a Box

Cubase is one of the darlings of the ST/TT MIDI market right now, and with good reason. Its music editing capabilities are very good. The list price is \$589, or \$150 less than *Notator*. Its scoring and printing capabilities are not as well implemented as *Notator*, but for most musicians, editing is more important than printout. They want printout, so *Creator* doesn't quite do what they need. It's unlikely that they will publish sheet music though, so perfect printout is unnecessary. Thus, we have the increasing popularity of *Cubase* by Steinberg-Jones.

Band in a Box is a low-end product retailing at \$88. It is an automatic arranger that lets you customize your styles and arrange them in minutes by playing in a tune through your synthesizer keyboard. If you want to start out in MIDI with electronic accompaniment which is easy and fun, you might want to give it a try. It doesn't try to be all things to all people, but it is a good, fun tool to work with.

New Atari Products

Atari had several things to show but nothing you haven't heard of already. [See "Atari Press Releases," page 10, for a more detailed description of some of the new Atari announcements. -JW] Bob Brodie was showing the *STBook*, which should release in the 1st quarter of '92 if it can pass FCC and Atari can resolve production difficulties.

Atari did have a TT running Unix and it is available now to developers. Unix is a very powerful multi-user operating system designed for high end applications and manipulating large amounts of data from a variety of input sources. Atari's Unix, running on a TT, is designed for a single user running X-Windows.

Atari also featured three new '386 MS-DOS machines. One portable/notebook that had a 40 meg hard drive and 2 megs of RAM with a VGA screen. Their

DOS machines are okay. Nothing special, well made but perhaps over-priced in today's markets.

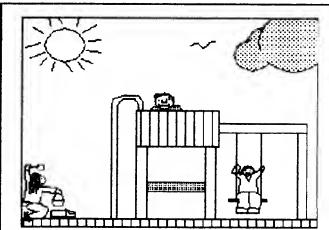
At the developer party hosted by Sam Tramiel, Sam said that Atari needs to attract TT developers and new dealers of a very high class. The fact is that there are probably only about ten developers in the United States who are actively pursuing the Atari market. Of these, five are making money, and all are looking elsewhere for new markets. ISD has expanded *DynaCadd* onto the Amiga, and Softlogic is more successful with *Pagestream* on the Amiga.

The Spotlight Elsewhere

This Comdex belonged to Macintosh and the clones. Although the ST/TT is still one of the best operating system/machines on the market and its potential is still great, to stay with Atari, we must remain rebels in the U.S. market.

Yes, Atari put on a good show, but its challenge is not to convert the missionaries. It's the natives who need convincing, and their hearts are being stolen by the clones, Apple, and even the 68040 convertible Amiga. Atari needs to set some sales records. Like Al Davis of the L.A. Raiders says, "It may be unfortunate, but in the final analysis all that really matters is winning."

Can educational software really teach your child to think?



The day was humid but windy and the kids were playing on the playground. The kids were laughing happily as they played on the swing and in the sand. Suddenly, the wind blew a big cloud over the playground.

Page 1

*** Yes! ***

**Kidpublisher Professional
Kidpainter**

**Super Kidgrid
Telegram**

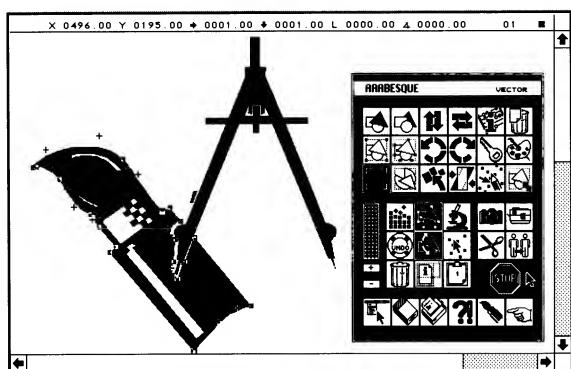
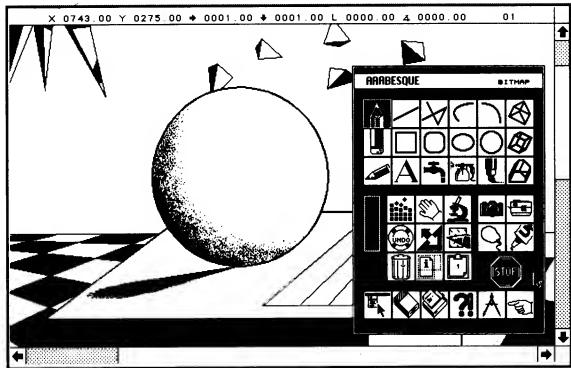
Atari ST/STe/Mega with color monitor required.
Printer must accept an ST screen dump.

kidprgs by D.A. BRUMBLEVE
217 337 1937

Arabesque™ PROFESSIONAL

Illustration made easy!

Arabesque Professional is a complete Bitmap and Vector based illustration program. It allows you to create, import, edit, and save graphics in the two standard computer formats, Bitmap and Vector.



Features include:

- Easy to use, icon-driven, pop-up menus.
- Edit up to 20 drawing pages in memory.
- Draw points, lines, Bézier polygons, B-splines, circles, ellipses, arcs, 2D/3D, and rectangles (with or without rounded corners) in Bitmap or Vector mode.
- Choose from various line end styles, thicknesses, drawing modes, etc.
- 108 different fill patterns, edit your own or use an image block.
- Block operations (rectangle or arbitrary shape) including: cut, paste, mirror, rotate, bend, increase contrast, contour, smooth, enlarge, save and load.
- Outputs to 9- and 24-pin dot matrix, "Bubblejet", as well as Atari and HP laser printers.
- All functions operate rapidly in magnification mode.
- A complete UNDO feature.
- Load and save various graphic types including IMG, IFF, Degas, NeoChrome, Doodle, Calamus CVG, GEM/3 and Arabeque's own compressed formats.
- Configurable "spray can" feature.
- Complete selection of drawing modes, including: replace, XOR, AND, transparent, reverse, and more.
- Easily convert Vector graphics to Bitmap graphics, with optional use of gray scales.
- Fully illustrated manual.

Arabesque is also a program with an incredible amount of attention to detail. Its speed will amaze you, while its ease of use will astound you!

Arabesque is compatible with all Atari computers. It supports large display screens, like the Moniterm. Requires at least 1 megabyte of RAM and a monochrome monitor.



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GRIBNIF SOFTWARE

P.O. Box 350 • Hadley, MA 01035 • USA
Tel: (413) 584-7887 • FAX (413) 584-2565

The Fourth Criterion

The Junkyard Pussycat waxes very sentimental when he thinks about the good times he has had at Atari shows. These are occasions full of sound and fury: fast-moving action at the retail booths, the earnestness of the seminar presenters, the conviviality of the cocktail hour, all reinforce one's identification with things and people of the Atari persuasion.

The occasional stroke from a loyal reader and the chance to renew old acquaintances from the on-line world bring particular joy to the Pussycat.

The Pussycat has never been to any show other than the one in Washington, DC, his home town, so he can only imagine what it must be like in other places.

The Criteria for Success

Bob Brodie, Atari's director of communications, has published a set of key indicators for the success of an Atari show:

- 1) Did the public go away happy?
- 2) Did the developers who participated go away happy?
- 3) Did the retailers go away happy?

This line of thinking emphasizes the commercial side of the affair to the exclusion of all else. Since, however, the organizers of an Atari show are usually volunteers who do this out of their own good will, one must add another criterion:

- 4) When it was all over, were the organizers ready to do it again?

If the people who toil for months on end to bring all of the elements together do not find it a rewarding experience, they will lose their energy; they will apply their talents elsewhere; and there will soon be no more shows.

The Dark Side of Atari Shows

Over the years, the Pussycat has seen attendance fall off, the pool of workers shrink, the ranks of developers thin, and dealers disappear. If one looks behind the gaiety one sees a dark side that makes one suspect that the days of big Atari shows, like those of the spotted owl, are numbered.

They are probably numbered for the same reason: the habitat is being devoured by larger forces. The spotted owl's forests are falling prey to the lumber industry. The Atari user community is falling prey to the clone makers, the Macintosh missionaries, or the peddlers of desktop UNIX workstations.

The Dwindling Audience

The Pussycat's local user group has about one fifth the number of members it had just four years ago. This tale is re-



The Junkyard Pussycat

by John Barnes

peated time and time again around the area. Magazines have folded for a lack of subscribers. Traffic on the local BBS's is a shadow of its former self. The number of local bulletin boards supporting Atari users diminishes day by day. The flow of Atari computers to new users is a mere trickle.

As the number of user group members falls off, so also does the number of able bodies available to work a show. Those who have been taking up the slack are experiencing burnout, and there is a severe shortage of new leadership to replace them.

Thinning Ranks of Developers

As the user base shrinks, Atari programmers are finding that they have to earn a living by doing something else. As the market becomes more mature new products tend to look like existing ones, which slows the rate of acceptance.

A number of the developers who were at the 1990 WAACE show did not appear in 1991. Some, like Michtron, had slid off into bankruptcy. Others, like Goldleaf, developed cash-flow problems. Some promising new entries, like Lexicor, just didn't quite have the means to make it. How many of the struggling new arrivals that we saw will be around next October? How many of the old hands will be experiencing cash flow problems of their own?

The cost for a development house like Codehead to send a team of people clear across the country for a couple of days is pretty substantial. How many developers whose product range and visibility are more limited can afford such a jaunt? Is a show really the best use of the limited cash available for promotion?

A few new products from Europe caused something of a stir, but how many of these will really be accepted in the American market? It is too soon to tell. Importers of these products find that they have big up-front costs in translating manuals, adapting the software for North American users, and meeting the advance order requirements of the European publishers.

Indeed, we see some signs that Atari's European market, long touted as the company's salvation, is itself starting to shrink. Without new products much of the excitement that brings audiences to shows will disappear.

Disappearing Dealers

Once upon a time, the Washington, DC area once had six or more people from whom one could take home packages containing Atari products; now there are only three. This theme also seems to be echoed around the nation.

To some extent the commercial success of the shows may be a direct consequence of the inability of ordinary users to find a nearby place where they can see, touch, and try a full

range of Atari hardware and software. In that sense, the shows certainly siphon off money from dealers who cannot reach out. Some dealers come to shows out of a sense of desperation, to move product that has been cluttering up their inventories. The deep discounts that showgoers expect also set unrealistic pricing levels that many dealers with rent to pay cannot compete with.

This gives rise to the paradoxical (some would say heretical) notion that the success of the user group shows is a symptom of a dysfunctional marketplace.

How long will it be before there are no more dealers? Will Atari users have to fill all of their needs by mail or from itinerant merchants who come through but once a year? What kind of product support will these merchants provide? What is in it for the hometown dealer who has to repair machinery that was purchased from someone else long ago and far away?

When that point is reached the market will have imploded like a dropped thermos bottle.

The Pilgrimage Effect

It is somewhat remarkable that Glendale and WAACE have not seen steeper falloffs in attendance. One explanation may be a "pilgrimage" effect. Hard core Atari devotees will go a long way to "celebrate" Atari. (Metaphors courtesy of Pattie Rayl and Ralph Mariano.)

The multitudes who gather in front of St. Peter's in Rome do so in the expectation that the Pope will bestow a blessing on them. Some similar effect must be at work at Atari shows. The first question many visitors ask is, "Where is Atari?" Many who call before coming to a show ask, "Is Atari going to be there?"

From the way the question is stated, the Pussycat believes that these faithful expect to see a miracle of some sort. There are those who claim that some shows could thrive without Atari. The Pussycat understands, but does not believe this.

Atari's Role

With its small staff, Atari has more important things to do than to preach to those who have already seen the light. However, no one has yet worked out a way to satisfy the faithful without a flesh and blood Atari apparition. In the absence of competent area representatives, Bob Brodie has to keep climbing onto airplanes to spend his weekends in some distant corner of the continent. For really special occasions, he brings along a few of the techie types.

While the Atari spokespeople have nothing more to say than what they have already said elsewhere, the faithful seem to take new sustenance from the gospel according to Atari. How long will they keep coming back to that particular well?

One must also recognize that Atari's financial interest in these affairs is minimal (if, in fact, they are not a fiscal burden). Those in attendance have already bought their computers. Of course, they might buy new ones if the newer, more exciting models were actually available to touch and feel. Alas, however, the few prototypes that exist must be saved for trade shows where they can be promised to new dealers for delivery sometime in the future.

Atari's primary role in the community is to produce an abundance of novel and exciting products and to move these

into the hands of new users. Educating and assisting developers in the creation of new software and peripherals is their next most important mission. Atari's successes on these fronts have been few and far between.

The user group shows do not appear to have any broader role in Atari's visions. The shows do not serve as a focal point for promoting increased user group activity; they do not appear to contribute to the professional growth of the developers; nor are they forums for introducing data processing professionals to Atari's product line.

Promotion that would bring the non-Atari public in to the shows would be beyond the means of user groups and Atari alike. While the groups can put on a creditable show for their fellow users, they cannot mount the kinds of glossy demonstrations and flashy promotions that sway the general public.

The Swap Meet

Without some external factor to redirect their focus, the user group shows may well become like baseball card shows or model train shows—little more than swap meets for aficionados. Most of the other orphan computer brands seem to appear only as curiosities in the computer flea markets that move around the area.

Indeed, the frenzied activity in the small swap room at WAACE '91 may be a harbinger of this trend. Of course, the fad may be short-lived as people may have been mainly trying to unload their stuff while it still retained some residue of value.

The 8-bit segment of the Atari community seems to have passed over this bridge already. It has been next to impossible to drum up commercial 8-bit activity for the upcoming Chicago show and the few 8-bit folks wandering the halls at WAACE seemed to be muttering that there was no way they would ever come back. They did enjoy some success in trading equipment among themselves in the swap room, however.

Professional Shows

In other platforms we see professionally organized efforts. The Mac World and World of Amiga shows are examples. Shows like the Federal Office Systems Expos attract end users of MS-DOS, UNIX, VMS, and related software and hardware. Efforts like the Seybold and Siggraph expositions serve more specialized markets.

The attempt by the organizers of the World of Atari shows to bring this kind of thing to the Atari community foundered for a variety of reasons. A lack of audience, high costs to participating developers, and friction with user groups have all been mentioned. Inept scheduling and poor market choices may also have contributed.

At the end, these shows were simply costing too much money for the number of visitors being brought in. The lack of audience can be directly attributed to Atari Corporation's failure to penetrate the North American marketplace.

On the basis of the Mac World and World of Amiga shows one can estimate that 1 to 2 percent of the users within a hard day's drive will attend a show for their brand of computer. This can yield an audience of 10-20,000 people at a well-placed show in North America. If we generously esti-

mate the ST population in North America at 250,000 we could expect 600 to 3000 visitors to a show like Glendale or WAACE, which is not far from what one observes. These numbers are also consistent with those for the Dusseldorf AtariMesse if one assumes that there are about 800,000 ST's within easy travel distance of Dusseldorf.

These numbers are admittedly crude, but it is difficult to see how any North American Atari show could attract the kinds of numbers that would lead to continuing profits for professional exhibit firms.

The Field of Dreams

The Atari user community has filled the gap left by the absence of professional shows, with amateur "Field of Dreams" efforts—"Hold a show and they will come." It all looks so easy until one thinks about it.

The perennial user group shows have established track records that permit visitors, developers, and retailers to predict, with some certainty, how well their expectations will be fulfilled. The organizers of these events have achieved their successes using a combination of hard-won experience and market savvy.

The best way to gain experience is to start small, keep expectations modest, keep the number of outsiders involved to a minimum, and use inexpensive resources. The recipe seems to work for a number of local efforts within the ST community. For the larger efforts, continuity is important. One can

not keep one's skills honed by plunging in once every couple of years. People come to expect that things will happen at certain times in certain places and they can make plans well ahead of time.

The Bottom Line

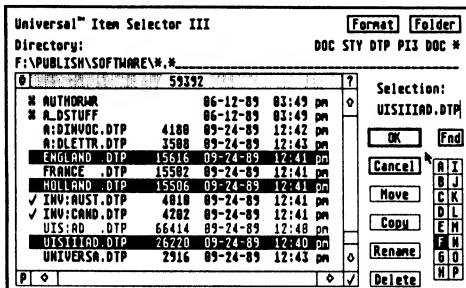
The November *Current Notes* and other media reported that the WAACE show on October 11th and 12th of 1991 was a big success. By Bob Brodie's three criteria it was, smashingly. However, a cautious observer could see the dark side.

The *Pussycat*, wearing his J.D. Barnes costume, has perhaps been too close to the business of organizing several editions of the WAACE show. J. D. and his colleagues in this effort have rearranged their personal lives and reached out to others in the community in what has become a year-round effort. It is time for others to step into their shoes.

Other institutional changes are also required. Small groups must band together, coordinate their activities, and subordinate their local interests to those of the community as a whole. Atari has to depoliticize the process of endorsing the user group shows and deal with them in a more structured way.

By the time you read this, the results of this process will be known. Whichever way the decision goes, the fourth criterion, the one Bob Brodie missed entirely, will be the deciding factor, at least as far as WAACE is concerned.

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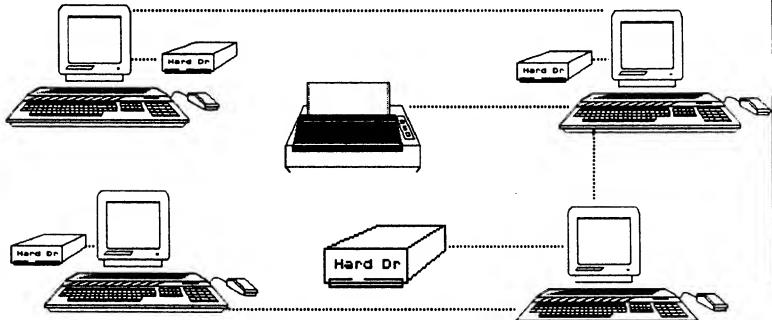
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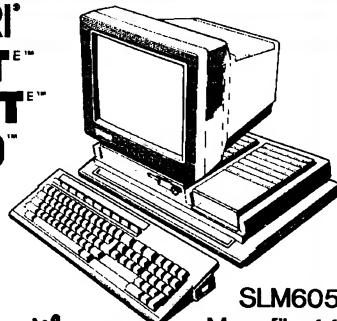
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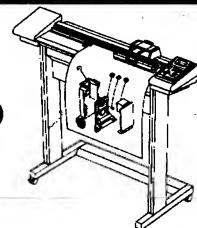
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Text and Words, Oh My!

I wasn't sure this column needed to be written; I mean, it's a reasonable topic for this space all right, but everyone knows the difference between text editors, word processors, and desktop publishers, right?

Wrong. When confusion arises in the workplace, among people who work with these sorts of programs, I must scratch my receding hairline and think "Hmmm..." Let's see if we can figure out who shaved the barber.

Text Editors

Text Editors are at the "low end" of our spectrum; their forte is to build and edit files consisting of lines of ASCII characters, each line ending with a <Carriage Return/Line Feed> sequence. Just vanilla ASCII text.

The text editors' lineage is a straight line of descent from the old keypunch machine. Text editors are popular with programmers and are often built into compiler packages and other applications where this kind of thing might be useful, such as telecommunications programs.

When programmers went on-line and the keypunch machines went away, it was still important to be able to arrange source code statements on separate lines. Many programmers still prefer to organize their code that way even when compilers don't require the old card-oriented fixed format.

A basic text editor may have no printing capability at all; you might have to depend on a simple printer dump to get a hard copy, and its appearance may be less than pretty.

If you have a compiler or a telecommunications program, you probably have one or more text editors already. I used to have three: the one built into *Flash*, the one that's part of the *Laser C* package, and a desk accessory. The last I dumped because it crashed too much. The *Laser C* editor is convenient for C programming due to some language-sensitive features built into it, and the *Flash* editor is ok for editing messages received/sent by modem.

Word Processors

If you think of a word processor as a kind of super-smart typewriter that can print an original copy of any document you've saved, you're not too far off the mark.

A typical word processor has two major sections: an editor and a print formatter. The editor portion of a

word processor is a lot like an entire stand-alone text editor program, allowing you to type original text, and including similar editing and cut-and-paste features.

Some will automatically number paragraphs for you, construct a table of contents, take care of footnotes, and even build an index. Nice stuff for research papers and articles.

The second half of the word processor is print formatting, and this is where we find the greatest difference between them and text editors. The print formatter works with the editor very closely. In the editor portion, you can "mark" portions of your text to indicate special effects you want to see in the printed copy (e.g., underline, italics, bold), and you can change fonts. These "marks" for special effects are embedded in the document and saved on disk as part of the document file.

Here the saved file isn't just plain vanilla ASCII anymore; it has these control signals embedded in it for margins, page length, special effects and so forth. Since the controls are unique to each individual word processor, only that program is really comfortable with them.

The result of all this is that your printed document will look as though it was typed by a skilled typist. A significant point: we've now added to the ability to create and edit text files a serious concern for nicely formatted hard copy output.

Desktop Publishing (DTP)

DTP programs are a rather different species. They are precision tools for page design. These programs can combine text (i.e., words) and graphics (pictures) to provide a truly professional quality page layout, such as for advertising or magazines like *Current Notes*.

A wide array of fonts and font sizes are available with these programs, and every element of the page layout can be controlled with a high degree of precision. The more powerful programs can control placement on the page to within 1 point (1/72 inch) or better. With some effort, one can control size and placement of every character with this kind of precision.

You can edit text and graphics in most cases, but these programs are not well suited for large scale text entry or editing, nor are they all that well suited for making original drawings. In fact, the vendor is likely to suggest that you create your text files with a word

processor or text editor, and use the DTP program's text editing features for minor adjustments. Similarly, you'd probably find it more convenient to create your artwork with a more complete drawing program.

DTP programs usually support a wide variety of printers, but are most commonly used with laser printers or other high-resolution printing devices. We're not even thinking about typewriter appearance here; the keynote is professional quality page layout, and the precise control required for that purpose.

Summarizing the Overlaps

A good word processor can do just about everything any good text editor can do. In addition to its specialized document storage and print formatting capabilities, it can be used to produce and edit plain ASCII text files--even program source code.

Some text editors do boast blinding speed that word processors may not be able to match. On the other hand, a decent word processor should at least be able to keep up with your typing speed, and to move around in a document with reasonable alacrity. The word processor is also able to produce better looking hard copy.

DTP programs are usually less than satisfactory for entering and editing text in any serious quantity; by their nature, they are apt to do a lot of screen redraws in order to preserve the WYSIWYG (What You See Is What You Get) appearance of the document. This slows them down. I can type fast enough to get well ahead of the one I've been using. Also, the ability to save a plain ASCII file may not be present--import yes, export maybe not. DTP programs are best reserved for that precision page layout job they're designed for.

The gap between WP and DTP has narrowed enough, at least in the IBM PC marketplace, that people sometimes wonder whether they actually need a DTP program at all. The high-end WP programs for PCs now have some ability to combine text and graphics in a document. The deciding factor has to be whether the WP program actually offers enough page layout and font controls for one's needs.

This decision is not really much of a problem for Atarians, unless products like *Wordflair* can really do both sorts of jobs effectively. I can't speak to that, since I've not worked with *Wordflair*.

What's for You?

If you do a lot of programming, and if you're not happy with the text editor that came with your compiler, then a stand-alone text editor might be to your taste. J.A. Wrotniak uses one extensively and is pretty complimentary about it.

A programmer working in multiple languages may find a single stand-alone editor convenient for another reason as well: you only have one editor's con-

trols to get comfortable with. This means you spend less energy figuring out how to do that edit operation and more thinking about the task at hand.

If you mostly do the kind of thing that could be handled by a typewriter, and your objective is to produce that kind of hard copy, then a good word processor is apt to be your speed.

Is DTP something you need? Well, look at the pages of this magazine, paying special attention to the more professionally executed advertising. If that's the sort of thing you need or want to do, then DTP is your thing.

Even the DTP user should also have either a good text editor or word processor, though. This will allow you to overcome the shortcomings of the DTP program when it comes to producing text in bunches.

I believe it is counter-productive to try to use too many different editors or word processors on a regular basis. The controls of each one will be sufficiently different to become distracting. It's better to settle on one program for most of your work; you'll get more proficient with it, and that's bound to improve your productivity.

One final thought: I've heard of folks who use a DTP program to print even casual correspondence, and therefore feel that they don't need a word processor for its print functions. Like the programmer, such an individual may prefer the text editor/DTP combination.

Have we shaved the barber? Maybe. The three sorts of programs do have different orientations, and you probably don't need one of each. DTP programs benefit from the external support of a text editor or word processor, but not necessarily both. My personal opinion is that a word processor is a good thing to have and to get comfortable with. A DTP program is hard to beat for that really slick looking document, while the stand-alone text editor is something of a specialized item, appealing more to the working programmer or the person who uses the DTP program to print everything. Unless you're a compulsive consumer or a software collector, you probably don't need more than one good example of any of these three kinds of products.

*Merry Christmas
And a Happy New Year!*



Favorite ST/Mega/TT Software

by Mike Heininger (c) 1991

Favorite software for the Atari ST, Mega, and TT is always a hot discussion topic whenever Atari users gather. Like yard sales, sometimes there's no accounting for individual tastes—a program jewel for one user may be a dud to another.

When comparing programs, we just about have to separate them into at least work and play software. As for the most important criterion, what is more vital than greatest value to us personally?

To force the cream to the top, let's limit our lists to 20 programs in both work and game categories. If you're really masochistic, try limiting your choices to 10 each—or 10 in one combined list!

Let's not worry about any newer or better programs that we may not be using, either because we aren't familiar with them or because we're simply satisfied enough with our present programs.

Surprises and omissions are inevitable. My lists reflect what I do a lot (word processing, spreadsheets, flight and combat simulations, music) as well as what I rarely do (programming, tinkering, fantasy games, and data bases).

If we had more room, we could: (1) write a sentence about other programs we might consider if we were starting from scratch; (2) mention programs that most disappointed us; and (3) acknowledge programs (either in development or wishful thinking) that we hope to buy soon.

But for now—for you to skim to see if there might be something you should consider—I have listed here my favorite work and play Atari ST/Mega/TT software programs.

What's on my current wish list? *Prodigy* (won't happen foAtari; I asked them), *Secret Weapons of the Luftwaffe*, *Red Baron*, *Wings*, *Blue Max*, *Railroad Tycoon*, *Knights of the Sky*, and *Civilization*. Horrors, all games? Yes, I have the productivity software I need.

Sure, I'd like a good integrated program like *PFS:First Choice*, but that is so unlikely I don't even wish for it anymore. And a free file system that lets you jam a bunch of unrelated stuff on one disk and search the entire disk by key word would be great. But I'm not holding my breath.

<u>Work Favorites</u>	<u>Game Favorites</u>
1. VIP Professional	1. Air Warrior (on GENie)
2. WordPerfect	2. Falcon Operation Counterstrike
3. ProCopy	3. Their Finest Hour
4. Music Studio	4. Team Yankee
5. EZ-Track Plus	5. Red Storm Rising
6. EZ-Score Plus	6. Tetris
7. Degas Elite	7. F-15 Strike Eagle II
8. Aladdin (GENie)	8. F-19 Stealth Fighter
9. Quartet/Stereo Playback	9. SkyChase
10. Spectrum 512	10. M-1 Tank Platoon
11. Easy Draw	11. Midi Maze (Kill a Happy Face)
12. Flash	12. Chessmaster 2000
13. Planetarium	13. Battlehawks 1942
14. Geography Tutor	14. Jack Nicklaus Golf
15. Disk Doctor	15. Sim City
16. CAD 3-D	16. Advanced Destroyer Simulator
17. Comp. Guide to Solar System	17. Sherman M4
18. Thunder	18. Silent Service
19. Microsoft Write	19. Powermonger
20. Publishing Partner	20. Target (CN ST Game Disk 1)

For controversy, I confess to having many of the fancy utilities but mostly using the basic stuff the Atari 1040ST came with back in 1986. Including TOS 1.0. Compatibility and reliability are two of my favorite words. Sigh ... power brokers hate me.

So what are your favorite programs? Make your own lists—and don't be surprised if you are surprised at what programs really mean the most to you.

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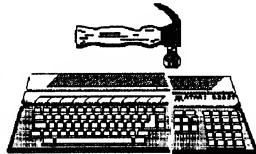
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ST TOOLBOX



by J. Andrzej Wrotniak

Programming as a State of Mind

Procedures, Functions and Subprograms

...and whatever other names may they use

Programmers of yesteryear were perfectly happy having at their disposal the basic tools: numeric and textual data objects, instructions to perform operations on them (add, multiply, store etc.), and, last, but not least, some means to communicate with the outer world (input/output).

And, indeed, even limited to just these basic tools, it is, in principle, possible to write any program. I say "in principle," since, with increasing program size, managing program complexity may become, at first, difficult and expensive, and then, virtually impossible without additional programming constructs introducing higher levels of abstraction.

For the last 35 years or so, the progress in the craft of programming was going simultaneously in two separate, although related, directions. One was to provide more convenient data objects, not limited to just single numbers or text strings, and better suitable for description of real-life objects the program may be dealing with. The second direction was to organize the program instructions in a more convenient and re-usable manner, grouping them hierarchically and encapsulating them into "black boxes" with well-defined external behavior and hidden internal mechanisms.

The discussion of the first of those directions will have to wait until one of the next articles in our series, when, finally, we will deal with data structures (up to the level of object-oriented programming). The second one, the program abstraction, is our subject for this month.

Subprograms (a.k.a. Procedures and Functions)

Depending on the language you are familiar with, you may have heard about procedures, functional procedures, functions, subroutines or methods. It just of-

This is the fourth article in the State of Mind series. The series is aimed at the readers, programmers or not, who are interested in the general principles of programming and programming languages; this is not a programming course.

The previous installments appeared in *Current Notes* of April, May and July, 1991, but they are not strictly necessary to understand (and, hopefully, enjoy) the current one.

Encouraged by the response of our readers, we are planning to continue *Programming as a State of Mind* through the next year; it will be appearing every two or three months, alternating with the regular *ST Toolbox* column.

ten happens that people designing a new language also invent new names to denote old concepts. The real reason for this remains unknown; I suspect that this is to draw a line between the uninitiated and the insiders.

Anyway, all the program elements mentioned above are also known as *subprograms*. In general, a subprogram is a piece of a program, whose execution can be invoked with a single instruction.

Simple Procedures

The simplest form of a subprogram can be found in some dialects of BASIC (as a matter of fact, it was the only form available in the early versions).

Imagine a program, where the same sequence of instructions occurs in more than one place, like in this BASIC example (we are using a quite primitive dialect here, very much like STOS).

... skipping the first part of the program...

```
100 LET s = 0
110 FOR i = 1 TO n
120 LET s = s + a(i)
130 NEXT i
...
230 LET s = 0
240 FOR i = 1 TO n
250 LET s = s + a(i)
260 NEXT i
...
and here we continue with something else...
```

Even those who have not programmed in BASIC (fear not, you have not lost much!) can figure out that the repeated piece of code adds up *n* elements of array *a* and stores the result in variable *s*. Such a fragment can, indeed, occur many times within one program.

Our program can (and should) be rewritten with use of the simplest BASIC procedure construct as

... skipping the first part of the program...

```
100 GOSUB 1000
...
230 GOSUB 1000
...
1000 LET s = 0
1010 FOR i = 1 TO n
1020 LET s = s + a(i)
...
here comes the declaration of our procedure:
```

```
1030 NEXT i
1040 RETURN
```

Note that this form of procedure is not really much more than a typing shortcut: a *procedure call* (GOSUB 1000 in this case) is exactly equivalent to re-typing the procedure text (without the terminating RETURN, which means "Go back to where you were called from.")

On the other hand, even this rudimentary mechanism has other obvious advantages. If we want to change our summing procedure (for example, adding up squares of array elements), the modifications will be limited to just one place in the program. Program modification and maintenance become much easier.

This simple procedure mechanism is present in many languages (with procedures denoted by names rather than line numbers, but this is just a technicality), with C and Pascal being just two of them.

Please note that all the *data objects* (here: variables) used by our procedure are shared with the rest of the program. In other words, they are visible and accessible from any program line. This may often lead to errors. If, for example, the variable *i* is used somewhere between lines 100 and 230 to store something we need *after* line 230, then its contents will be destroyed by using it as a loop counter inside our procedure! In even moderate-size programs this is a common source of problems.

Almost all programming languages (except the most rudimentary dialects of BASIC) address this problem by allowing the programmer to declare variables *local* to the procedure (i.e. invisible from outside). This is shown in the (ugly) Pascal version of our Procedure 1000:

```
PROCEDURE Sum;
VAR i: INTEGER;
BEGIN
  s := 0.0;
  FOR i := 1 TO n DO s := s + a[i];
END;
```

Variables *s* and *a* are still *global*, i.e. shared with the rest of the program (after all, it is the task of *Sum* to use them), but the counter variable, *i*, is now visible only from the procedure body (i.e. the code between BEGIN and END). If there exists another *i* in the program, it denotes an entirely different object! Let us consider the following piece of code:

```
VAR i: INTEGER;
.....
i := 5;
Sum;
WriteLn(i);
```

The printed value of *i* will still be 5, as *i* declared inside *Sum* denotes an entirely different entity than *i* declared in the main program.

Procedures with Parameters

Our *sum* procedure is quite dumb: it can only add *n* elements of array *a* as opposed to any number of elements of any real array. This is because the only way for *Sum* to exchange information with the rest of the program is via *global variables*.

In some dialects of BASIC this leads to cumbersome work-arounds (reload the summed array into *a*, store the number of elements in *n*, only then call subroutine 1000). Luckily, all other languages (and many dialects of BASIC as well) offer a mechanism to pass data to and from a procedure via *parameters*: add up a *given number* of elements of a *given array* and store the result in a *given variable*, as in this FORTRAN example:

```
SUBROUTINE SUM_IT(A, N, S)
  INTEGER N
  REAL A(N), S
  S = 0.0
  DO I = 1, N
    S = S + A(N)
  END DO
END
```

In order to compute *Z* as the sum of first *M+4* elements of some array *X*, we just need to call

```
SUM_IT(X, M+4, Z)
```

The communication between the *calling program* and the *called subprogram* proceeds entirely via *procedure parameters*. In the procedure declaration these parameters (called also *formal* or *dummy* parameters) are *A*, *N* and *S*, and they are just placeholders for the parameters used during the procedure call (or the *actual* parameters--in our case *X*, *M+4* and *Z*).

Note that if the formal parameter is used for input (passing information to the procedure), the corresponding actual parameter can be any arithmetic expression (like *M+4*), but if it is used for output, then the procedure has to be called with a variable in its place. For example, a FORTRAN call

```
SUM_IT(X, 8, 7)
```

may lead to highly entertaining (and compiler-dependent) results: the program may attempt to store the sum of the first eight elements of array *X* into a constant 7, which does not make any sense!).

Input and Output Parameters

The conflict between the *intent* and *usage* of a parameter shown above will be avoided in some other programming languages. For example, Pascal allows that we specify the *mechanism* of parameter passing. Some parameters will be passed *by value*, and some *by reference*. Instead of a formal description, let us illustrate these two mechanisms by rewriting our procedure once again:

```
TYPE Arr_1000 = ARRAY [1..1000] OF REAL;

PROCEDURE Sum( VAR a: Arr_1000; n:
INTEGER; VAR s: REAL);
  VAR i: INTEGER;
BEGIN
  s := 0.0;
  FOR i := 1 TO n DO s := s+a[i];
END;
```

(We will return later to the necessity of declaring the `Arr_1000` array type, one of the ugliest features of Standard Pascal.)

Our procedure can now be called as, for example

```
Sum(x,200,u);
```

which means: store the sum of elements 1..200 of array `x` in variable `u`.

The keyword `VAR` preceding a formal parameter (which has to be a variable in such a case) denotes that it is passed *by reference*. In other words, whenever this parameter occurs inside the procedure, it actually denotes the actual parameter used at the procedure call: whatever you do to `s` in `Sum`, is really done to `u`.

On the other hand, a formal parameter without `VAR` will be computed when the procedure is called, and copied into a temporary variable inside the procedure body. Whenever such a parameter is referred to inside the procedure, really the temporary copy will be used!

A common error among beginning Pascal (or Modula-2) programmers is to forget that copying a value-passed parameter protects it from any changes. For example, if we just skip `VAR` in front of `s` above, the program will compile just fine, but the computed sum (stored in the local copy of `s`) will never be returned to the calling program and stored in `u`.

Making a local copy may, for large data objects, take some time, and this is why in the above example we declare the array `a` by `VAR`, even if we do not intend to modify it. The `VAR` before `a` may be skipped and the procedure would work just fine, although (for most compilers, at least), slower.

Because of the explicit difference between `VAR` and non-`VAR` parameters, the compiler will be able to flag as an error any illegal calls, as

```
Sum(x,2*n,s/2.5);
```

(you cannot store the result in `s/2.5` which is an expression--it has to be a variable, and one of the `REAL` type; any other actual parameter will cause a nasty error, usually undetected by the compiler).

In C, Do It with Pointers or with Mirrors

The C language is somewhat different in this aspect, as it passes all parameters by value (by the way, all subprograms in C are called functions). In order to return a result from a C function, one has to resort to a simple trick: passing, explicitly, not a variable but its machine address (or, as some say, a *pointer* to it). In the ANSI C standard this may lead to the following:

```
void Sum( double a[], int n, double* s ) {
  int i;
  *s = 0.0;
  for (i=0;i<n;i++) *s = *s+a[i];
}
```

Here, `double*` `s` in the formal parameter list means "`s` is an address of a floating-point variable," and `*s` means "variable under address `s`." (Having to add the `*` in front of `s` every time is a minor nuisance and a frequent source of errors.)

Now, to call our procedure we just have to write (assuming `x` is a `double` array and `z` is a `double`) something like

```
Sum(x,100,&z);
```

where `&z` means "address of `z`." The function will compute the sum of elements 0..99 (yes, C numbers array elements from 0!) of `x` and store the result in variable `z`.

The necessity to use `&` in the function call is, perhaps, the source of more programming errors in C than all other reasons combined, at least with use of the older (i.e. non-ANSI) compilers. These compilers will not find anything wrong with a call

```
Sum(x,100,&i);
```

where `i` is, say, a 2-byte integer variable. Now the program will attempt to store an 8-byte `double` in a 2-byte storage for `i`--and this will usually lead to overwriting of some other (usually vital) information.

Most non-ANSI C compilers would also allow you to write

```
Sum(x,100,z);
```

Forgetting to put & in front of z has an equally disastrous result: a **double** value will be interpreted as an address (somewhere in North Dakota instead of your RAM) and **Sum** will attempt to store its result under that meaningless location (read: two or three bombs on your ST screen, equally nice results on other computers).

This is where the ANSI C standard (on the ST implemented in Prospero and Lattice 5 compilers) helps a lot. It requires that every used function has its formal declaration (called a *prototype*), visible from the calling module. The prototype specifies the number and types of formal parameters. The number and types of the *actual* parameters have to agree with those in the prototype, and the compiler will not allow you to use an address of an **int**, or a **double**, as the third parameter of **Sum**--it has to be an address of a **double**, nothing else.

(A similar improvement to FORTRAN has also been introduced in the FORTRAN/90 standard, but as of this writing I have yet to see a compiler for this language, for any computer.)

By the way, C++ (sharing with C the syntax, but not much more; this is a civilized language!) introduces parameter passing by reference without a need for explicit use of pointers. Our function will look almost the same as in C:

```
void Sum( float a[], int n, float& s ) {
    int i;
    s = 0.0;
    for (i=0;i<n;i++) s = s + a[i];
}
```

and a corresponding function call may be

```
Sum(x,100,z);
```

Here **float& s** means exactly what **VAR s: REAL** meant in Pascal: "s is a parameter of a real type, passed by reference." Different notation, exactly the same concept.

If I am elaborating on the distinction between the two mechanisms of parameter passing, this is not without a reason. Understanding this difference is one of the most important stages in understanding programming (at least at the elementary level).

GFA BASIC Joins the Crowd

By the way, the new GFA Basic 3.5 (if you have any lower version, get this one!) also allows for specifying parameters as passed by value or by reference; after the cludgy design in Version 2.0 this is a relief! Just to give you the flavor, let me re-write **Sum** in this dialect:

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```

PROCEDURE Sum( n%, VAR a(), s)
  LOCAL i%
  s = 0.0
  FOR i% = 1 TO n%
    s = s+a(i%)
  NEXT i%
  RETURN

```

Note, that in GFA Basic 3.5 *all* parameters following VAR are passed by reference (in Pascal VAR has to be specified for each individual one). These are, however, just syntax details; the principles are, indeed, the same.

Functions

Although in C the word *function* is used for any subprogram (procedure), in most other languages it denotes a subprogram returning a result *via its name*, so that the function call can be used as a part of an arithmetic expression. What it means can be illustrated by rewriting our Pascal example as a function:

```

FUNCTION Sum( VAR a: Arr_1000; n: INTEGER ): REAL;
  VAR i: INTEGER;
  s: REAL;
BEGIN
  s := 0.0;
  FOR i := 1 TO n DO s := s+a[i];
  Sum := s;
END;

```

In the last line the function name is used on the left-hand side as if it were a variable, which is the Pascal value of returning a result via the function name. Now, a call to this Sum may be, for example

```
u := sqrt(z+Sum(x,100));
```

which means: "compute sum of x from 1 to 100, add it to the value of z, take a square root of the result, and store it in u." This way we can write functions and use them in the same way as the standard functions (sqrt, log, sin etc.) provided in many languages.

Now we can see why the C example above used the word *void* in front of *Sum*: it just denoted that our function was not returning any result (via its name, that is). The ANSI C (or C++) version would be

```

float Sum( float a[], int n ) {
  int i;
  float s = 0.0;
  for (i=0;i<n;i++) s = s+a[i];
  return s;
}

```

(which allows us to avoid using pointers). Note that C's return s is equivalent to Pascal's *Sum := s* followed by the immediate exit from the function.

The Problem with Pascal Arrays

As similar as most languages may be to each other in the area of subprogram tools, there are some minor differences and peculiarities, some of them quite annoying.

A good example for this is how array parameters are handled in Standard Pascal, where every parameter of a subprogram has to be of a previously defined type. You can not say "the parameter a will be an array of REALs," like you can do in C (or even in GFA BASIC, as shown above); you have to declare an array type (which, in turn, means fixing the array size), and then use this type as a parameter--exactly as in our example.

This is one of the most questionable decisions made by Prof. Wirth in the design of Pascal, virtually disqualifying this language for almost any serious use. Look, our *Sum* procedure (or function) can, indeed, sum up elements of a real array, but only as long as the array has exactly 1000 elements! (We can compute the sum of any number of them, but the whole thing has to have 1000 elements; not less, not more!).

All this means that if you want to add elements of an array which has, say, 125 elements, you have to define a new array type, and to write another version of our procedure, dealing just with this type, nothing else. This is, to put it mildly, outrageous.

When Pascal was undergoing the process of standardization, the committee of learned computer scientists from many countries quarreled long and tough about what to do with this booboo. As in most walks of life, good sense does not have to prevail in computing (otherwise we wouldn't be living in a PC jungle). The whole affair led to a bitter political division, and finally a compromise was reached to introduce two *levels* of the Pascal standard: Level 0, having the limitation described above, and Level 1, with a somewhat inconvenient tool to circumvent it.

Out of 20 or so Pascal compilers I have seen, just one (for the little-known Stratos minicomputer) has the Level 1 implementation. All others implement Level 0. This is a sad thing. Imagine writing a linear algebra package with separate versions of all subprograms for arrays size 2, 3, 4 etc.

Luckily, the Pascal standard has one more limitation: it does not allow for separate compilation. In FORTRAN you can compile subprograms separately, and then just *link* them to the program; in other languages (Modula-2, C, Ada) you can separately compile *modules*, or groups of subprograms to be linked. (We will discuss program modules in a separate installment of this series.)

No such thing in Standard Pascal: all the code you write has to be submitted to the compiler at one time, with various subprograms nested (directly or not) in the main program. This also is a major nuisance: after all, functions like `sqrt` in Pascal are also compiled separately and included into the language library: you do not have to include their source code into every program you write (and, indeed, you do not care how the square root is computed as long as the result is right).

This, to quote George Orwell, means that "some animals are more equal than others"--or some subprograms (those supplied with the compiler) are on different right than others (yours). You cannot write a subprogram, test it, compile it, and from that moment on treat it as a black box (the way you treat `sqrt`).

Here is what "luckily" above meant: most of present-day Pascal compilers ignore this limitation of the standard and allow for independent compilation of modules of subprograms (a notable exception was *Turbo Pascal* in its early versions, below 4.0). This means that a subprogram is declared (with all its body included) in a different compilation unit than the one from which it is called (where just the header declaration has to be given, very much like the ANSI C function prototype). The compiler is not able to check whether you religiously follow the limitations of Level 0, and you are free to do some type-cheating.

Let me spare you the details (if you really need them, write me c/o *Current Notes* and I can send you a copy of my short article on how to do it, published in the July/August issue of 1987), but yes, type-cheating is what makes Pascal a language usable for array handling.

Even without separate compilation and staying within the strict language standard, it is possible to bypass the fixed-size array limitation (although the resulting code is neither pretty nor very readable). Once again, let me spare you the details; maybe some other time.

Summary

There are obvious gains from using subprograms in your code. First of all, we gain re-usability: one subprogram replaces many identical (or almost identical) pieces of code, scattered all over your programs.

Second, by encapsulating a specific fragment of code in a subprogram, we can draw a distinction between the subprogram *specification* (i.e. what functions it performs for given parameters) from its *implementation* (i.e. how these functions are internally performed). It happens, quite often, that the specifications of subprograms in a program remain frozen, while the implementation is being improved (program becoming faster, smaller, more accurate etc.).



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Current Notes

Vol. 11, No. 10

A brief digression: some popular utility packages for the ST are good examples of changing implementation while keeping the specification frozen. For example, most of the ST programs call procedures supplied by Atari on ROM (read-only memory), which draw things on screen. There are thousands of programs on the market, and all (or almost all) call these subprograms. And here comes Mr. Darek Mihocka with his *Quick ST*, which does nothing other than intercept our calls to Atari-supplied GEM procedures and replace them with his own. By keeping the subprogram specifications unchanged, *Quick ST* fools other programs into thinking that they still call the original screen routines. The implementation, however, must be drastically different, as you can easily tell by watching your screen redraw much faster.

Third: object scoping. By using locally declared data objects, avoiding the global ones as much as it is possible, and exchanging information with the outside world via parameters, we may avoid the danger of side-effects: that a piece of code, in addition to doing its designated work, will affect some other data in the program.

Fourth: enhanced readability. A piece of code saying $y := \sin(x)$ is much more readable than a detailed sequence of instructions actually computing the sine functions. (Besides, we do not feel like coding all these functions ourselves; we already paid someone to do it for us!)

Finally, subprograms can be written by one programmer (or a team) and used by another, without even knowing the implementation details. In development of medium-to-large projects this is a lifesaver. Even a single programmer will benefit, not having to remember how his old (and, hopefully, well-tested) black boxes work inside.

There is, of course, some price we pay for all these conveniences. In the best case, even the process of *entering a subprogram and returning* from it (passing the parameters, remembering where to return, etc.) takes some extra CPU time and some extra code in the compiled program. It would not be very reasonable to write a function, say, to just compute a very simple formula (e.g. to add two numbers): a function call would be as complicated as the instructions it replaces (and we still pay the overhead). [Some languages, notably C++ and Ada, allow for declaring small subprograms as *inline*, where a subprogram call is replaced by the compiler with its actual code; this may help.]

In both theory and practice, the advantages prevail--and by a large margin. The concept of the subprogram, one of the oldest in computing, is still one of the most valuable. Its anonymous inventor deserves a place in the Computing Hall of Fame.

More on Quick ST 3.0

Responding on-line to my short write-up of *Quick ST v.3* from last month, its author, Mr. Darek Mihocka, turned my attention to the fact that the old Version 2 would not work properly with many programs compiled with the *OSS Personal Pascal* compiler (many other compatibility problems, of which I was never aware using *Quick ST v.2* all the time, have also been removed).

Well, the problem with *OSS Pascal* programs (including my own old *Sky Map*) somehow slipped my mind. Indeed, it is the improved compatibility (rather than the less significant gain in performance; the previous *Quick ST* was already very quick!) which may induce you to upgrade to Version 3.

On the other hand, I really liked the idea (present in v.2, but not in v.3) of including into the package a trimmed-down version of the program, somewhat slower but *much* smaller, for those occasions when space is at premium. Those of us who have 2 Mbytes of RAM or more, do not really care (thank you, Mr. Zubair, your upgrade still works like a charm!), but the one-megabyters might really appreciate having this option.

I am also not so happy having to keep the customizer accessory in memory in order to use a custom desktop pattern. This is an extra 20k (and, besides, I still cannot make the customizer work with my *NeoDesk 3.05*). The old design, where the customizer was used just when needed to install the pattern in the program itself was, I think, much better. Even if I have lots of memory, I feel bad wasting it without a real need.

If I am so particular on these points, it is because *Quick ST* is one of my favorite utilities for the ST and I would like to see it as good and useful as possible, especially if it can be done without much extra work.

Note that while the performance of the new *Quick ST* is quite close to that of *Turbo ST* (with *Quick ST* having some edge), the memory size gap has virtually disappeared, and the price difference has narrowed down quite a lot. One may expect that the next stage of competition between the worthy opponents may move into the area of extras and trimmings. Given the skills of programmers on both sides, this may be well worth watching!

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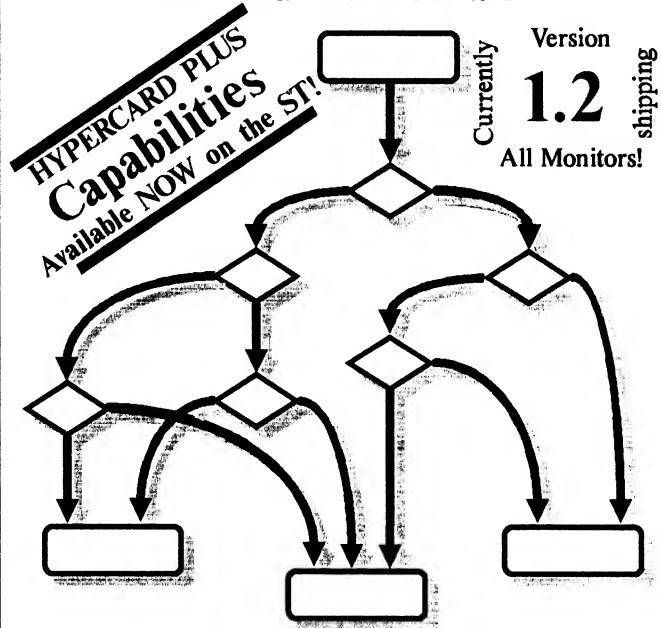
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Happy Holidays

The frenzied time of year, when mothers start wrapping their children up so that only their eyes are visible through a thick mat of wool, when Halloween is preceded by Christmas, and Thanksgiving is but an insipid rehearsal of the family gatherings which will come a month later, has its grip on us. That's why the November cover for CN was kinda nice. At first I was confused about it. Was the software like a fine wine? Was Mike Heininger suggesting drinking away our lack-of-software blues? For those of you who didn't happen to read the "About Our Cover" last month, the theme was this: Are the glass and the Atari software market half-empty or half-full? Joe and Mike suggested that we see the market as half-full, and that we be thankful for the thousands of dedicated people who've all made contributions to the Atari market. That's a theme I wholeheartedly endorse.

Current Notes

They don't call this magazine *Current Notes* for nothing. I've got several things I've been putting around with, and not all of them merit a complete article. So, in my typical fashion, I'll jot down some current notes on my projects and some observations and then we'll move on to the topic of the evening, ST networking.

The TTM194

For one reason or another, it's taken me until now to get the TTM194 19" two-page display

from Atari. This is not Atari's fault. It just took me awhile to get my order in. But anyway, I have it now, and I'm using it to write this article. No one has said much about this monitor; most discussion (and display) of the TT030 has been on the PTC1426 color monitor.

It's nice. For those of you familiar with the Moniterm Viking 2 monitors on the Mega ST machines, the TTM194 performs identically, but faster. The resolution is the same as the Moniterms (1280 x 960), but because all the driver hardware and software is built into the TT, and because the TT is running a 32MHz 68030, the monitor runs faster than on the Mega ST's.

The TTM194 also uses a circuitry scheme called ECL. I'm not entirely sure what this stands for, I'll check and let you know. But what it does mean is that it's faster, and it is also incompatible with the Moniterm cards on the Mega ST's. So, for those of you who own the Viking 2's now and want to attach them to the TT030 with no modification, good luck; I don't think it will work.

The Mega ST Moniterm board had its own video RAM, so when you used the Viking 2 on an ST, you didn't have to sacrifice any RAM to the monitor. Not so on the TT030. You end up using about 500K more with the TTM194 than with its 14" color counterpart. This is not a big problem on my TT, which has eight megabytes, but for those of you who may have less RAM, it may be a problem with some applications.

Because the TTM194 has no way of supporting the standard ST resolutions, programs which were hard-wired to work in ST resolutions will have trouble running on the TTM194. The *Tempus* text editor, for example, is hopelessly bounded to the ST resolutions. So, those programs are rendered useless unless someone develops software that will emulate the SM124 640 x 400 resolution. (A few German VME graphics cards include this feature to maximize compatibility with existing software.)

I've gotten used to color. The TT medium resolution mode, which is 640 x 480 with 16 colors, is great for a comfortable and colorful desktop. There's a nifty little program called "Newdesk Icon Editor" that is a CPX (Control Panel eXtension) for the new control panel. This will let you customize any icon, by modifying or appending to the DESKICON.RSC file. You can create color icons. You can give the data and the mask different colors. That's nice. I created perfectly loathesome cutesy icons for my desktop, in color. I made my SyQuest drive cartridge icon true color. I made my network icons (ooh—it's foreshadowing) cute colors, and color coded them. I was most pleased. When I pulled off my color monitor and put on my "Big Mono," it was quite a downer to see my beautiful hand-crafted icons turned stone black. There's no grey scale--no subtlety or passion. But, I got used to it. Now, I'm enjoying writing this piece with the beast.

For anyone who likes writing, a 19" screen is a definite help. Being able to see more than one paragraph on-screen is truly a spiritual experience. When you're writing, you can see where you've been and that helps determine where you head. When you're editing, you can see significantly ahead and behind where you are, so the last-minute sentence you're adding in will tie in seamlessly with your piece. It's just an aid to help you write more consistently and give your writing a more cohesive feel.

Anyone remember the computer desk I bought last March? And how it was the answer to all my troubles? Well, I've got these two monitors now, and a laser printer too, and a hard drive, and to be succinct, they won't *all* fit on my table. (Gee, who would have thought they'd make a two-headed Atari *again*?) But anyway, I've got to rearrange things a bit. Again. Sigh.

There is a solution to this, and I think it may be what I'll finally

settle on. Two German companies, Matrix and Crazy Dots, make large-screen color monitor cards. There are, of course, trade offs. The monitor cards take up a VME slot. They cost about \$1,000. And the absolutely gorgeous monitors (that make your stomach rise well up into your chest area when you look at them) these cards drive are way expensive, like on the order of \$2,000. I'm hoping that these monitors will come down in price, but, anyway you slice it, you're looking at spending two to three thousand dollars on monitors for a color monitor of the same size. The \$1,400 list of the TTM194 means it's not prohibitively expensive, but color is nice, and it's something I miss more and more each day now.

TOS 2.05 on the STe

In some of the experimenting I've been doing, I found that it's a simple operation to remove the Mega STe's TOS 2.05 OS ROMS

and plug them into a 1040STe. There are two jumpers inside the 1040STe, W102 and W104, that when using TOS 1.6/1.62 have pins two and three shorted together. When you transfer over the Mega STe TOS to the 1040STe, you just change the jumpers to short pins one and two together. This will cause the two 1Mbit ROMS to be read correctly in the 1040STe.

The 1040STe can use the 1Mbit ROMS because it has sockets that will accomodate them (32 pins). You can't plug TOS 2.05 into a standard ST for two reasons. First off, the standard ST's two ROM configurations, consisting of either two or six ROMS, use 28-pin sockets only. Secondly, they only house enough address lines to access a 192K OS. TOS 2.05 is 256K of manly OS. So, there's no simple plug-in way to make TOS 2.05 work on a standard ST.

There has been much discussion about the release of TOS 2.05 for use on the standard ST ma-

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chines. In my capacity as an Atari dealer, I can say that this rumor is largely bunk. What Atari *has* done is allow third party companies to license TOS 2.05 from Atari at a reasonable fee and create adapter boards that will allow the 256K TOS 2.05 to be read from the standard ST machines. This development is in the works, and as soon as it's ready, you will see it on the ST. But there is a trade off with this method. A board that plugs into the ROM sockets is just *one more thing* to try to shove under the hood of a 520 or 1040. There is no room left. There's so much *solderless* lurking inside your average ST at this point that things are just knocking around wildly. Machines are behaving erratically, bombing periodically, and getting ornery. It may well be time to consider the upgrade to a Mega STe or TT, because, honestly, the benefit of a reliable machine is incalculable.

ST Networking

The rest of the world is Appletalking or Ethernetting or Novelling and it makes us Atarians feel like neophytes when it comes to the world of networking. While virtually nothing (in this country) has been done to make the ST a networkable machine, every other computer has developed standardized integrated network systems. And they're fast and reliable, too.

The most natural avenue through which to do networking on the standard ST machines has been the MIDI ports. They run at 32,000 Kbits per second (Kbaud) and thus they end up with a 3-4 Kbyte per second (K/sec.) transfer rate. Contrast that with your average hard disk transfer speed of at least 200 K/sec. The average speed is about 500 K/sec., and faster drives can do over 1 MB/sec. And your average floppy speed is 18-20 K/sec. You can see that MIDI networking is slow. There are few alternatives.

A&D Software, the guys who brought us Universal Item Selector, have an ST network package that

lets you hook ST's together in one of three ways. You can use the MIDI ports, for slow but reliable networking. You can use the TT or Mega STe's LAN port, which, like Appletalk, delivers about 15-18 K/sec. transfer speeds comparable to a floppy disk. The other option is to use Paul Swanson's Lantech cartridge-based system, and, like Ethernet, it delivers about 10 Mbits per second--just about as fast as a hard

.. use any combination
of the available
network interfaces to
link together any
variety of machines
with any variety of
cabling.

drive. The A&D Software, as of this writing, only supports the first revision of his cartridges, which are bigger and bulkier than his second version cartridges, but A&D is working on a driver for the smaller sleeker faster LT-201 cartridges.

The truly beautiful quality of the A&D software is that you can use any combination of the available network interfaces to link together any variety of machines with any variety of cabling. Example: I have a TT030 linked via the LAN port to a Mega STe. I could, if I had more TT030's or Mega STe's, link them all into the LAN port network. I also have a 1986 1040ST attached to the network through the MIDI network interface. And it's possible to connect other machines to the MIDI network, too. As soon as A&D gets the LT-201 cartridge driver working, I will hook that up as well, and I'll have links to my point of sale system at very high speed, too!

Each network "driver" is assigned its own icon. So, on my TT030, drive N is the LAN port network, and when you open drive N, you get a directory containing folders for each machine on that

network (in this case only one Mega STe is accessible from the TT). Inside those folders, you find folders for each disk drive device (C,D,E,F etc.) available to the remote computer. Opening the "C" folder, for example, produces the directory of my Mega STe's C drive, just as if it were local to me, and I can run, copy, delete, or shuffle programs around just as though the machine were before me. In fact, on the TT/Mega STe NewDesk desktop, you can drag the "N:MEGA-STe\C" folder to the desktop, change the icon to look like a disk drive, and lo and behold, you have an icon for the Mega STe's C drive. That's pretty nifty. Similarly, drive O is the MIDI network on my TT, and when you open drive O, you get folders for each machine on the MIDI network. In this case it's just my 1040ST. The MIDI network is, of course, slower than the other options; but it works.

Suppose for a second that I want to copy something from my MIDI-netted 1040ST to my LANned Mega STe. All I have to do is access drive N on the 1040, (which accesses the TT030), open the folder for the TT's drive N, open up the folder for the Mega STe, open up the folder for drive C, and copy from my 1040's native window to the remote drive C's window. It's that easy. The file is MIDI'd to the TT, and LAN'd to the Mega STe, and the TT and Mega STe could both be doing something completely absorbing and unrelated.

The heart of the A&D software is their "OS-M" multitasking network operating system. It allows for the kind of behind the scenes access of hard drives I just mentioned. So you have complete access to all hard drives no matter what the remote machines are thinking. The only thing about OS-M is that you can't use something like Spectre or PC-Speed, which will take over TOS. OS-M has to be active and a running TOS process for it to

be able to interpret the "requests" coming in from the LAN, MIDI, or cartridge ports respectively.

A&D includes a background copy accessory which will allow you to copy large files without tying up either the source or destination computer. This is especially useful if you wish to copy a large file over the slow MIDI net. The system also allows for sharing of printers. Each computer on the network can make available a folder called "PRN," and anything copied into that folder will be sent to that computer's parallel port. A&D includes an accessory to redirect printer output to any disk file you name, and it's easy to just cite a disk file that lives in another machine's PRN folder. With my system, I can print things to my TT's PostScript laser from any machine on the network.

Paul Swanson's Lantech hardware is excellent, but the software he includes uses a scheme called "Partition Locking," which pre-

vents any two computers from writing to the same partition at the same time. This will certainly limit errors, but it also limits flexibility. The A&D OS-M routinely uses "file locking" and has provisions for "record locking" from within database applications. File and record locking are standard equipment on PC/Mac LANs at this point. This way, two people can write to the same hard drive at once as long as they're using different files. And with record locking, databases that are designed to use it can allow writing to the same data file by two users, and only if they are writing to the same record will there be any slowdown. It is rumored that Versasoft is considering a recompile of *dbMan* that will support the A&D record locking. And as soon as the Lantech LT-201 cartridges are supported by A&D, their software with Paul's hardware will be the fastest network on the ST.

Other Options

A&D claims to be working on a "one size fits all" LAN system, but I have no clue what hardware interface it will use. It is supposed to be "fast." There are other U.S. companies (whom I will not mention so as to preserve their sanity) who are working on extra fast, complete, ethernet type systems. There are several TCP/IP very fast systems in Germany, but they're not over here yet. We will have to wait for them.

I Must Go!

I have been promising Joe this article all week. It's Saturday. It was due last Monday. Andrzej Wrotniak is here to pay us a visit. And I said I'd have this done by noon. It's 1:18 pm. So, I must send this to Joe now to insure this article's inclusion. Next time I will tell every secret you ever wanted to know about ST's and high density disk drives, and I'll also have a follow up on networks. See you next time!

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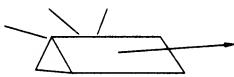
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File	Edit	README.21R	#000057 c:\$0D
Ed Open...	Find/replace	0 & 2.1R	23 Jan 1991-----
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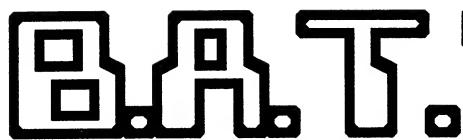
EdHak's Text mode window shown underneath "Hack" mode window

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Futuristic Science Fiction

Review by Alfred C. Giovetti

Espionage

Blade Runner-Cyberpunk Surrealistic Atmosphere

B.A.T. stands for the Bureau of Astral Trouble Shooters (Why not *B.A.T.S.*?). The game starts with the hero of the game arriving in Terrapolis, the capital city of a remote planet, named Selenia. Selenia is three months "time travel" from earth. Terrapolis and Selenia are very different than any graphic art seen to date. The French seem to have a real flair for art, and the backgrounds and graphics of this game really show that artistic influence.

The futuristic surrealism will disorient you. *B.A.T.* is another CRPG that is most difficult to start, because of the unusual nature of the interface and the strange art work. The unusual nature of *B.A.T.* extends to the plot and will take some time to get used to. You may feel like a "stranger in a strange land."

B.A.T. is a "kill the evil scientist" game. Your goal is to locate Vrangor within 10 days and stop him and his mob from exploding "nucturobiological" bombs in Terrapolis. During your quest, you will have to battle Meringo, an ignorant hood, to get to your goal. While on the planet, Selenia, you can explore the 1100 settings in the city and the underworld, fly the flight simulator, listen to the digitized four track musical score, and observe 300 animations.

A Unique Source Of Khegol

Why does your boss and the galactic government care about this backwater pigsty of a planet? Terrapolis and Selenia are the only source of Khegol, an element that makes space travel possible. Planets now depend upon that resulting trade for survival. The destruction of Selenia would result in chaos in the rest of the galaxy.

In addition to the normal inhospitable inhabitants of Selenia, the great god of the galaxy saw fit to program into the game an infinite number of killing robots who stalk, scan, and attack you when you show weakness. You should run from these battles.

A Host Of Characters

Within this vast world are physicians, water fountains, museums, cinemas, police station, jail, a desert, nightclubs, arcades, armorers and weapons merchants. *B.A.T.* has a full featured 3D flight simulator called "the drag" (partly because this flying chariot drags its way through the air and is quite unstable) that you must learn to pilot.

No Schoolbook Solution

UBI Soft calls *B.A.T.* a "distributed adventure." Computer's Dream redesigned and rethought the animated adventure and gave *B.A.T.* some very unusual features and functions. The story line is totally nonlinear with parallel solutions, subplots and parallel plot lines. There are no "right" solutions and the game can be won in a variety of different ways. All plot lines lead to the same endgame result, whether it be winning or losing.

The graphics are highly detailed and colorful, taking advantage of the ST's excellent graphics environment. The screens are flowing and cartoonlike, "designed to make the game come alive." The game is totally mouse controlled using a smart mouse pointer. The mouse pointer "dynamic icons" change when the mouse is moved around the screen.

The screen display depicts movement in the successive presentation of screen shots of locations. The whole screen must be examined and explored by mouse for hidden icons to determine the potentials for movement and interaction. Like earlier French games, the mouse is very sensitive and requires you to find locations the size of one pixel.

B.A.T. is primarily a graphic adventure with aspects of a role playing game. *B.A.T.* has a character generation system that allows you to set six "competences" or attributes (force, intelligence, charisma, perception, energy and reflexes) up to a total of 20 points from a pool of available points. *B.A.T.* has 13 "aptitudes" (skills). Your character can advance in levels and attributes with experience as in a role playing game, but you are only allowed 10 days to develop your character, accumulate necessary items and win the game.

Keep Moving!

B.A.T. character interaction involves seven races, three languages and 50 unique and distinct personalities. The non player characters are interesting and respond with character. You may have to fight as well as talk and trade with the natives. But you must always keep moving or you will never complete the game in time. Avoid stealing since you can ill afford to languish in jail for a day.

B.A.T. has combat with robots, some of the city inhabitants, the inhabitants of the vast undercity and, of course, the antagonists of the plot. There are a number of available weapons and you would be wise to equip yourself with a loaded weapon and familiarize yourself with the combat screen. You should save often. Some ST players have had problems saving the game to a blank diskette. It appears that some game disks have a bug that will only let you save on the original diskettes.

The combat screen shows your assailant and some innocent people in the center of the screen. Across the top from left to right are the "run," "choose weapon" and "shield" icons. To shoot you simply position your armed mouse cursor on the assailant in the center of the central picture and click the right mouse button. The bottom of the combat screen shows the assailant's reaction time and life level, and your life level, ammunition level, and shield field strength.

Impressive Sound, But Some Drawbacks

B.A.T. has digitized sounds and uses a separate piece of hardware, the MV16 card, to enhance the already impressive sound capacity of the Atari ST. The MV16 has 16 independent monophonettracks with an 8-bit per track capacity and a headphone 3.5 mm stereo jack socket that produces monaural sound out of both stereo channels. The MV16 plugs into the ST ROM cartridge port. (I had some difficulty determining which side was up.) The MV16 can be used to hook the ST up to a pair of headphones or to the auxiliary jack of your favorite stereo system.

B.A.T. comes with a 52-page adventurer's journal (that you should read from cover to cover).

B.A.T. has some drawbacks. I was unable to install the game on my hard drive. *B.A.T.* does not use the enhanced features of the STe. The game system and interface is hard to get comfortable with. *B.A.T.* lacks automapping and autocombat. The save game routine is limited and flawed with a major bug in some of the game disks and machine configurations. (I have two sets of disks and two machines and the bug appeared in both.)

B.A.T. is a very strange game that is truly not for everyone. If you like graphic adventures with a touch of role playing, you may like *B.A.T.* Although difficult to learn and play, once mastered, *B.A.T.* offers a unique and unusual experience for the game player. The artwork is some of the most beautiful that exists in computer games today.

[*B.A.T.*, \$49.95. Produced by Computer's Dream. ST version distributed by UBI Soft, 8 & 10 rue de Valmy 93100 Montreuil Sous Bois, France and 15 Atwood Avenue, Sausalito, CA 94965.]

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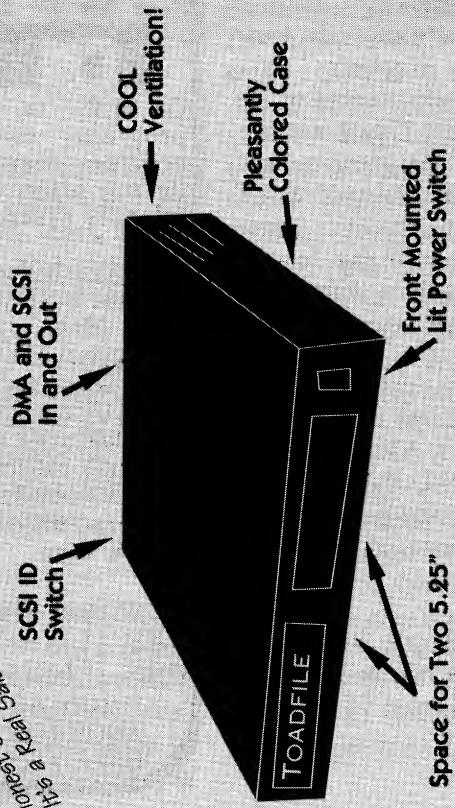
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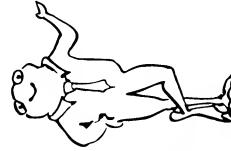
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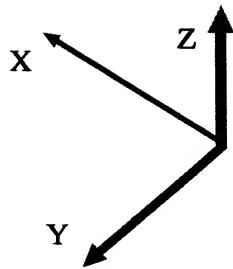
comes first.



ChromaCAD

Exploring the Third Dimension

Review by Rick Reaser



Taking the ChromaCAD Challenge

There was quite a stir at our September Users Group 8-bit SIG. Everyone was talking about this impressive advertisement in *Atari Interface Magazine* and *Current Notes* for a new 3-D modeling program for the 8-bit, called *ChromaCAD*. Surely no one could do something that exotic for our machines! I got a call from The Alchemist (CN's Ben Poehland) asking me to review it. That meant the program didn't just exist in an ad, but on a floppy as well!

I soon received a thick envelope with four diskettes, two manuals (over 200 pages worth), and a pair of 3-D glasses. It would be quite a feat to sort through all this material in the short six weeks I had to complete the review for *Current Notes*. I used the programs with several different computer setups, created several different 3-D models, and tried most of the features (but not necessarily in every combination). So, let's see what *ChromaCAD* is all about.

What is ChromaCAD?

ChromaCAD is a 3-D modeling system that actually consists of two (soon to be three) separate program modules. The physical analogy to *ChromaCAD* would be taking a piece of clay, forming it into any shape you want, then painting it--using your computer. *ChromaCAD*'s "Model Builder 91" program module lets you "shape the clay." The *ChromaCAD* "Surface Shader XE 91" module lets you "paint" your model and view it under different lighting conditions. The soon to be available "Printer Driver/Utility Disk" module will allow you print a flat picture of your creation to paper or to the screen from any selected angle under any selected lighting. In a nutshell, rather than merely drawing, then coloring, your pictures on a flat, 2-D surface, *ChromaCAD* gives you the ability to add true depth to your artwork.

The penalty for working in 3-D, however, is that you now need to worry about that third dimension. Normally, when you draw a picture on your computer or piece of paper, you only worry about how wide and how tall to make things. It's possible to make a 2-D picture look 3-D by using "perspective" and "vanishing points" like you learned in art class. But, in reality, you still only worry about how wide or tall to make the lines using special rules. That "wideness" direction is designated the "X-axis" while "tallness" lies along

the "Y-axis." With *ChromaCAD*, you also have to deal with "depth" or the "Z-axis" which runs perpendicular to the X and Y axes towards you straight off the paper or computer screen. Fortunately, *ChromaCAD* has some ways to help with this third dimension, but you'll still need to understand 3-D coordinate systems to some degree in order to use the programs. And, to use *ChromaCAD* to its full capacity, you'll need a basic understanding of how to plot points on graph paper.

I'm personally familiar with one other program for the 8-bit that works in 3-D. It's called *Atari World*, a 1981 translation by C. Kingston of an Apple II program called, believe it or not, *Apple World*, written by P. Lutus. *Atari World* is essentially a 3-D "turtle graphics" program. It allows you to draw 3-D, straight line, multi-color, wire frame models. The program allows you to rotate, zoom in, or shift the wire frame model from side to side or up and down. You can also write little programs to do this rotation, zooming and shifting so, in effect, you can "tour" your creations.

There are several BASIC type-in PD programs similar to *Atari World*. Two that come to mind are *Solid States* from the October 1984 *ANALOG* and *Easy 3-D Wireframes* from the July 1988 *ANTIC*. Both these programs run hot and fast under TurboBASIC. *Solid States* is file number 1672 in the GEnie 8-bit Library. File 3550 in the GEnie 8-bit Library, *DRAW3D.COM* is probably a wireframe modeler as well. There's also an Action! program called *View 3-D* from the June '85 *ANTIC*. The only drawback to all these programs is that your models are just wire frames; you can see right through them. Fine for making bird cages, but if you wanted the picture of your house to have stucco and siding, you were out of luck, until *ChromaCAD* came along.

ChromaCAD handles the third dimension using a different concept from *Atari World* or other Computer Aided Design (CAD) programs you may have seen or read about on "larger" computers (like the Atari ST or mainframes). Most 3-D solid modeling CAD programs take standard solid figures like cubes, cylinders and spheres and allow you to stick them together in various ways. Others will take wireframes ala *Atari World* and color the faces. Both these methods have several limitations. *ChromaCAD*'s method is very clever and entirely different.

How Does It Work?

The *ChromaCAD* "Model Builder 91" module builds 3-D models in "shell slices." Let's say you wanted to create a 3-D model of a paper towel tube: a hollow cylinder. Stand the tube on end. First you would plot a circle of points to represent the bottom edge of the tube. Next you would create another circle of points to represent a middle cut or cross section of the tube. Connect the points of the midsection circle to those on the bottom circle such that you create a bunch of triangular panels. As you create these triangular panels, you assign a color number to each. Next, create another circle of points to represent the top edge of the tube and connect these points to the middle section to make triangular panels as before, assigning color numbers as you go. These slices can be stacked over and over and the shape of the cross section can change along the way. In fact, a cross section can be a single point, so that you can close off the shapes. So, in reality, the shapes you create aren't really solid, but hollow shells that only appear to be solid from the outside. When viewing completed models with "Model Builder," only the lines representing the cross sections appear. So in the case of our paper towel tube, you would only see three circles stacked on top of each other. Now we're ready for "Surface Shader."

The "Surface Shader XE 91" module colors and fills in each of those triangular panels you created with "Model Builder." You can change the color assigned to each color number and set up the lighting and viewing angle for your creation. "Surface Shader" generates up to eight images of the model-each with the requisite lighting and coloring, in the extended memory of the 130XE or 256K RAMBO'd 800XL, then flips between them every 1/60th of a second to create a very high resolution video image. This flipping action can also be used to create 3-D pictures that appear to hop off the screen when viewed through the special glasses provided with the program.

Hardware Requirements and Compatibility

"Model Builder 91" requires a 48K machine to run successfully. I tried it on a plain-vanilla 48K 800, RAMBO'd 256K 800XL, and 130XE; they all worked fine. "Surface Shader XE 91" comes in two versions. It was originally designed for the 130XE, using the extended memory to store the screen images which are flipped in sequence on the video display. The second version works with ICD's RAMBO 256K upgrade for the 800XL. Since RAMBO uses the CPU mode to access extended memory and the 130XE version of the program uses ANTIC to do this, there had to be a few sacrifices. The RAMBO-XL version lacks a few of the "bells and whistles" of the 130 XE version. The author should be commended for going through the effort to make the RAMBO version. [8-bit Editor's note: Palette Imaging produced the RAMBO

version in response to complaints from that grumpy Alchemist fellow, who doesn't have an XE.]

ChromaCAD is a single disk drive operation. Both programs are self-booting from the diskette. Since the program is only accessed once during initial loading, this shouldn't be viewed as a handicap. You never need to swap disks between the program and the disk with your model data. Both programs load off a standard single density disk drive. I tried loading the programs on a Percom RFD40-S2 and U/S Doubler Atari 1050. The model data disks can be formatted in 1050 Enhanced Density for greater capacity. I was unable to get the program to work with true double density diskettes on either drive.

Both programs will work with either a color TV or color monitor. I tried both; to be honest, I liked the TV best for viewing finished models. The "smearing" and big screen on the TV make the models look "warmer" for some reason. Of course, the various text menus to run the programs look better on a monitor. Running on a monitor with separate chrominance and luminance is probably even better. I also tried my 800XL recently improved with Ben Poehland's Super Video Rev. 2 upgrade (CN, September/October 1991) and got good results. Using a monochrome setup defeats the purpose of the program (color is required for 3-D), so I wouldn't recommend that.

ChromaCAD is Forth based. Forth is a self-contained programming environment; as such, it comes with its own compact DOS. Forth DOS is not compatible with AtariDOS or SpartaDOS. Because of the Forth DOS, the programs can't be moved to a hard drive since they aren't structured as command files that could be loaded from a command line interpreter like SpartaDOS. This also means the actual model data isn't accessible except through the programs themselves. You can't intermingle *ChromaCAD* model files with other files on a SpartaDOS or MyDOS configured hard drive. A separate Forth DOS configured partition would be needed for this purpose. Unless you're a hard drive fanatic, operating off the diskettes isn't really that bad and doesn't slow things down, once the programs are booted.

The soon to be released "Printer Driver/Utility Disk" will allow you to store a screen image file (single view with one lighting) in AtariDOS. This will allow screen images to be transmitted easily via modem or by passing disks. The model data itself is presently confined to Forth DOS. The only way to exchange actual models would be to trade diskettes or use Bob Puff's *Disk Commander* to compress the disk into a single file and then decompress it.

Manuals

Each program module comes with a nicely written, plastic comb bound manual. The "Model Builder" manual is 136 pages long with over 60 illustrations.

The "Surface Shader" manual is 69 pages long, although the first 20 pages are identical to the "Model Builder" manual. Both manuals are essentially tutorials of the programs. Neither is organized to provide reference type information, but the index in each helps in this regard. A lot of time was obviously spent on the manuals, since they look professional and have a table of contents as well as an index. A program as powerful and with as many features as *ChromaCAD* really needs a comprehensive manual. The author even "test drove" the manuals with 14-year olds to ensure they were understandable.

Using ChromaCAD

ChromaCAD is a very powerful system, giving the user absolute control over every aspect of his model. Naturally, with all this power comes a requisite amount of complexity. Although the author makes great strides in simplifying things for the user, this is still not a program that you will master quickly. I found the key to success was to precisely follow the tutorials in the manual before branching out on my own. It was also imperative to understand three-dimensional coordinate systems and how they are used in the programs, so these beginning sections of the manuals are critical to success.

The program modules are essentially menu-driven. While plotting points on the graph screen with "Model Builder," there are special keystrokes that must be remembered to access certain functions and menus. There are also special keystrokes that must be remembered at the main *ChromaCAD* menu as well for both program modules. The manual has a separate page listing special keystrokes that can be used as a "cheat sheet." When plotting points on the graph, it's also possible to use the joystick to move the cursor around, which was quite handy.

In addition to the models in the tutorials, I finished six original creations of my own design using the "Model Builder" module. I created two cubes, a straight tube, an enclosed cylinder, a sphere and a pumpkin. Once I got the hang of it, the menus and memorized keystrokes were fairly natural. I quickly learned how extremely important it is to plan your model ahead of time. Once you save a contour line or slice to disk, your only option is to erase the whole line if you make a mistake. If you discover you made an error two lines back, guess what? You have to erase everything back to that point! Arrgghhh! Before you turn on the computer, have a good plan of attack and at least a few of the slices graphed out on paper. Enclosing the ends of models or figuring out how to have "dents" on the ends of models requires some advanced planning and use of special features provided by the program. One of these is a right hand rule, since the triangular panels are only visible from one direction.

"Model Builder" provides several excellent tools to help create contour lines. In addition to being able to plot points via the joystick, points can also be entered by coordinate number. The "drawing universe" is 65536 x 65536 x 65536 of points. There's even a tool to graft arcs and lines together. Mastering these tools is fairly easy and a must for speed in model building.

Connecting the points between contour lines to make the triangles is also made easy with several tools. Since it's a "done deal," once you store a contour line to disk, the program provides several ways to check your work. You can trace through the triangles to ensure they're properly constructed, or you can view the completed contour.

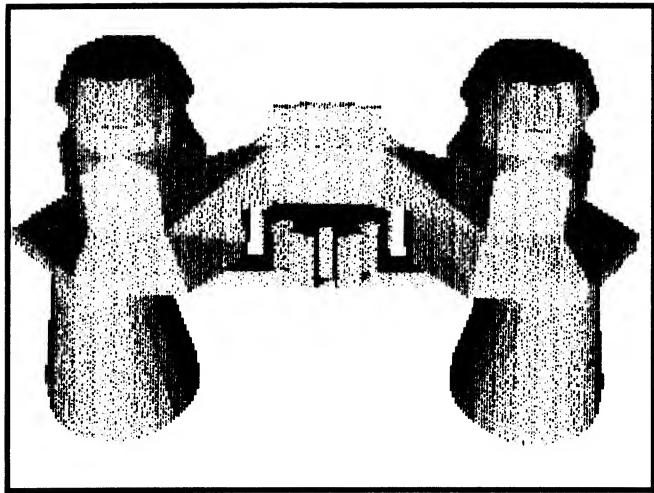
With "Model Builder," you can only view the models in contour line form. You can pick any viewing angle and even have the program display more than one model at once on the screen. To see what the sculptured surface looks like, you load the model into the "Surface Shader" module.

"Surface Shader" uses some of the same menus as "Model Builder," and the user interface is essentially the same making the learning curve a little less steep. The model orientation controls and 3-D coordinate system are also the same. The first thing I noticed was that models are loaded by number rather than file name. This appears to be an artifact of Forth DOS which handles things with block numbers.

There are an incredible number of options to invoke within "Surface Shader." You can orient the model any way you want and set up spotlights from any direction or elevation as well. These aren't just ordinary spotlights. The color of each light can be specified, and ambient light is also available. One of the special features that worked quite well for me was the highlighting option. This option overemphasizes the direct glare of light off the model as if it were a shiny surface. It looked quite realistic to me.

"Surface Shader" offers four different display modes, one of which provides a 3-D view with the accompanying special glasses. It took some adjustment of the knobs on my TV, but I got 3-D to work and was quite impressed. It's important to note that the amount of time to load a model into the computer depends on what mode you use and how many screens are generated. The more screens (read, resolution), the more loading time to generate an image on your monitor. It took about 45 minutes to generate the "head" model shown in the *ChromaCAD* advertisement.

Soon to be available is the "Printer Driver /Utility Diskette." I didn't have a copy of it to review, but I did see some output from it. It allows you to print the screen views of your creations. By using multiple passes with a used ribbon, incredible contrast (grey scale) is possible. Color printing is also supported. As previously explained, the utility disk also allows screen views to be saved in AtariDOS format for viewing by



This picture, and the one below, were made with a 9-pin Star dot-matric printer. Eight identical pictures (but different bit patterns) were superimposed to create the shading effect.

others. [Note: the illustrations in this article were produced with the new printer driver utility diskette and sent to us separately by the author. -JW]

Who Is ChromaCAD for?

ChromaCAD is targeted at graphic artists, according to the literature. The author intends to port it over to other machines as well. This shouldn't be too difficult since it's written in a high-order language, namely Forth. I wouldn't recommend this program to someone who isn't serious about 3-D modeling. This program is for high schoolers and above. It takes a fair amount of dedication and desire to master it. The results, however, are spectacular, especially for an 8-bit.

Quirks, Bugs and the Wish List

I found the menu system to be different from what I expected. It would seem logical to me that "in" would be to the right and "out" to the left. It's not hard to get used to, but it wasn't natural to me. I missed hearing a noise when I plotted a point. Sometimes I wasn't sure if I had hit the period key hard enough to plot the point. It was heartbreaking to have to erase a whole line when I made a mistake.

I was unable to crash to program, except when I tried to get it to initialize a double density diskette and while changing model disks. There should probably be more prompting when changing model disks while in the program. Error trapping appears to be quite thoroughly tested. Everything worked as advertised.

It would be nice to be able to change the position of a single point on a contour after the model is done to "adjust" things. It would be nice to be able to change the color number assigned to a triangular panel after saving as well. The lack of AtariDOS compatibility is workable, but not convenient. Once you start a new model on a diskette, it would be nice to be

able to add contour lines to a previous model. You have to work on a model to completion before you start another model on the same diskette. It would be nice to be able to give the models names rather than just numbers. If screen images could be stored in standard Atari picture files, they could be ported into other graphics programs, such as *MicroPainter*.

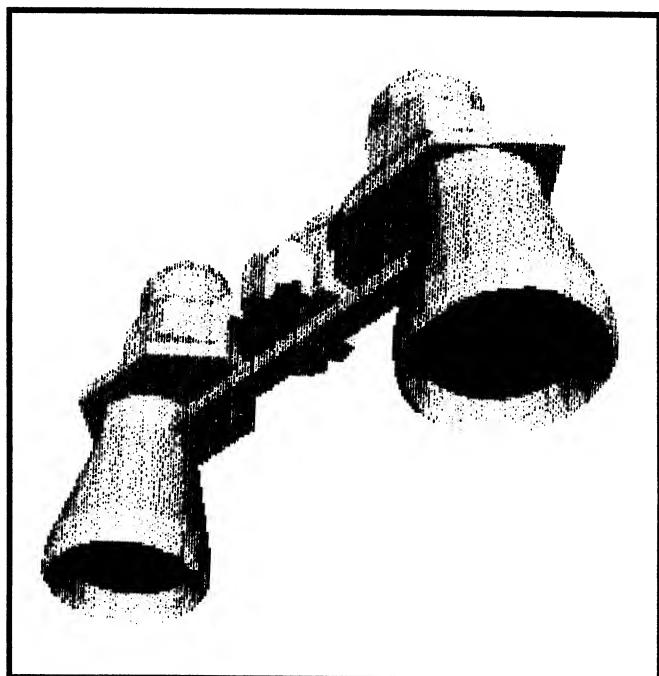
The popular *ANTIC* graphics program "Rambrandt" is also written in Forth and has many similarities to *ChromaCAD*, especially its DOS. It might not be that tough to load *ChromaCAD* screens into *Rambrandt* for 2-D editing.

The long load time for "Surface Shader" is unavoidable, but a nuisance. There's an option to turn off the screen to speed up things, so the author is sensitive to this issue.

Bottom Line

ChromaCAD is a very powerful graphics program unlike anything ever produced for the 8-bit in the past. It takes considerable patience to master, but results and the amount of control over the final product are unequalled. In order to be truly useful, you really need both the "Model Builder 91" and the "Surface Shader XE 91" modules, which are sold separately. I've only scratched the surface of *ChromaCAD*'s capabilities in this review. The *ChromaCAD* system isn't for everyone, but if you want to create shaded, solid 3-D models, this is the program for you.

[*ChromaCAD*, Palette Imaging, Inc., 1 Closter Commons STE, Closter, NJ 07624-0400. VISA/MC (201)767-3913. Model Builder 91, \$29.95; Surface Shader XE 91, \$29.95. \$4.00 S/H 7% tax for NJ residents. Printer Driver/Utility Disk, public domain, to be available on GEnie.]



Just the FAX for Christmas, Please

When Telling It Won't Do

Review by Frank Sommers

Doing It

"I did it! I just did it!"

"Did what?"

"Why, I just sent a FAX on my ST!"

"Big Deal," was the unkind response to our controlled excitement--the same kind of excitement and sense of wonder that you enjoyed when you made your first successful modem transmission.

But FAX? Why do modem users need FAX to communicate with each other? For several years now, we've scoffed at the idea of having a FAX machine in our home or office. FAX was for the illiterate, the computer illiterate that is. Those who weren't up to one of the 20th Centuries greatest inventions, or had computers but didn't know how to use a modem. After all, between computer colleagues, anything you had at one end could be read at the other end with a quick squirt of the modem.

And pictures?

Well, all graphics can be modermed.

And pictures?

Sure, pictures too; all you need is a scanner to turn them into an image file. And everybody should have a scanner before a FAX machine, if he or she is into desktop publishing of any kind.

Further more, FAXes can't be used as legal documents. Why not? Take one, scan it into *TouchUp* or any of your drawing programs, twist it around to say anything you want above the signature, print it out on your laser and you've got "new facts," not admissible in a courtroom.

But forget the courts, "your facts" can be sent to anyone who has a machine connected to a telephone, if you know the number.

So Charlie Smeton and Joppa got together and produced JoppaFax, which for \$169, less than half the cost of a normal FAX machine, turns your computer into a FAX transmission device, i.e. *send* only. The package consists of a 2400 baud modem (that will FAX at 9600 baud) and the requisite software, written by Smeton.

Is it hard to use? Harder than a normal FAX machine? We can't compare the two; we have never used a FAX before. But that may give you some idea of how

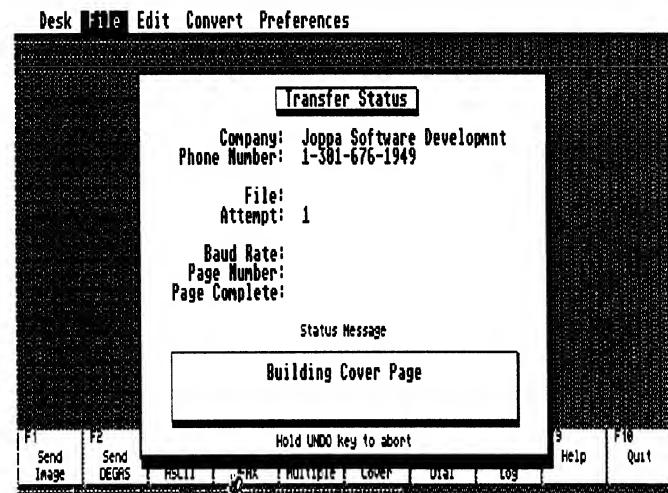
uncomplicated it is to shoot one on its way and cause your friends to look up as their secretary hands them a FAX, one from you.

To set up, after connecting the Hayes-compatible modem to your phone and your computer, you merely copy the contents of the software disk into whatever partition of your hard drive you elect to use or onto another floppy for use with your floppy drive. Five minutes later your first FAX should be pounding its electronic wings toward its destination. The five minutes is for exploring the menus or perusing the 50-odd page "JuST the Fax" manual. Both are plain and straightforward.

Both tell you how to send a file, be it image, Degas, ASCII or JFAX (document created or converted by the program). The four menu windows also instruct you on how to edit your dialing list, convert any of the four files cited above to JFAX and how to view them on the screen before transmission time.

Doing It

But let's send one. You have a little DTP cartoon or drawing with captions that you've cobbled together with a picture of President Bush telling you to forget, forget about ... a list of all our social ills in outrageous fonts, and then a little pix of a haunted belfry being circled by small winged creatures, suggesting what



you have in your belfry if you do what he says. Now that's something you want to get to your Republican fund-raising-friend in Philadelphia pronto. He's no computer freak but he has a FAX. So ... you run *JOPPAFAX.PRG* and click on the window at the bottom of the screen that says, "SEND IMAGE," or just hit Function key [F1]. Your fax is now seconds away from being sent.

A menu flicks on the screen, you select "FORGET.IMG" (the Bush cartoon), and click o.k. A cover page menu appears asking for "TO:" and "FROM:" info and whether you have a cover page message.

Another click and your dialing list of names and numbers appears. Once you click on the name and O.K., a window instantly tells you your document is being converted to JFAX format. When that's done, the Transfer Status Window automatically pops up and you hear the modem dial the number, the buzzing sound as it answers at the other end and the connect message. With that, first your cover sheet and then your document are beeping their way through the steel barriers of that hard-hat Republican sanctuary in Philadelphia.

Done Doing It

You've sent one. You've sent a FAX.

O.K. That's nifty. But what about documents other than image files, if you don't have a scanner to turn anything you want into image files? Or you want something more refined than a straight ASCII file? JoppaFax provides drivers for both *Calamus* and *PageStream* that allow you to prepare your document in either format and then load in the driver and hit the "print" button. Instead of printing to your printer the driver creates a JFAX file, instantly ready, without further conversion, for "FAXing." (See how fast you get use to using the term. Sending one is just as easy.)

Between paragraphs, we just sent a three page detailed letter, loaded with facts to our daughter at a business school in Fontainbleu, France. It took two minutes and 45 seconds. A phone call repeating the info and allowing for time to write it down, would have been easily a 20-minute operation. So FAX, it would seem, is here to stay. Now all we need is Charlie Smeton's receive program, which will hopefully be available early next year, for the price of a small upgrade to JOPPAFAX. Go, Charlie, go!

JuST the FAX!, \$169; Order Line (800) 876-6040; Info Line (301) 676-1948; P.O. Box 228, Joppa, MD 21085.

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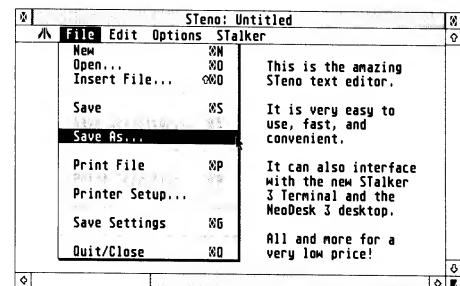
When run as a desk accessory, STeno places its complete drop-down menus inside its own window. This allows full access to its entire menu set from inside any GEM program.

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Code-Name: *Iceman*

Espionage Adventure Sierra Style

Review by Alfred Giovetti



Code-Name: Iceman is the only game Sierra has that is in the spy story and international intrigue category. Jim Walls, the developer of the Police Quest series, has developed this new game to satisfy those of us who want to live the life of a secret agent or James Bond-like character.

The plot places naval commander John Westland right in the middle of a plot involving the kidnapping of the U.S. ambassador to Tunisia by Middle East terrorists. John is on well-deserved leave in Tahiti where he can relax on the beach, play volleyball, swim, dance, and visit the bed-chambers of various femme fatales also pursuing well deserved rest and relaxation.

Soon our hero gets called back to the Pentagon, which is an animated sequence that we get to sit back and watch. These "cut scenes" allow for bridging elements of the animated adventure game and provide additional film-like entertainment for the game player. At the pentagon, Westland receives his assignment which requires proficiency with the submarine simulator.

In the endgame, we find ourselves back in the familiar Sierra interface, and we come face to face with one of Westland's female paramours from the Tahitian holiday. If he manages to navigate this one, John Westland will receive his decorations on the deck of an aircraft carrier with a final score of above 250 out of 300.

During the submarine simulator portion of the game, you can be killed at any point or simply lose the game by not responding quickly or appropriately to the captain's commands. I found this "arcade" sequence particularly distasteful since I had to determine how to comply with my captain's commands by trial and error. The documentation did not fully or clearly convey to my understanding the function of the ship. Save your game often in this sequence to minimize the frustration of dying often.

Soon I managed to figure out that the sub speed was controlled by the plus and minus keys. Diving and surfacing was accomplished by the up and down arrows, while the left and right arrow keys turned the ship appropriately. Even when I divined the purpose of the keys, however, I found them quite difficult to use and to judge the correct amount of movement in any one direction.

As the commander, you are responsible for repairing faulty equipment, especially the equipment in the weapons room, by using the lathe, drill press, or bench grinder. You should inspect the ship and make repairs as soon as possible.

Combat with other ships while using the simulator requires the use of the shift key and function keys to activate the weapons console, selection, targeting, imaging and firing. The

destroyer will end the game if you do not shut off the active sonar. The destroyer sequence is one of the obligatory arcade sequences found in all animated adventure games. I found the arcade sequences particularly distasteful and wish that all animated adventures came with an arcade sequence bypass upon several unsuccessful attempts. The arcade bypass is found in most Dynamix games, so we know that Sierra could very easily incorporate this feature.

Iceman is a Sierra 3-D animated adventure story which uses the standard Sierra "point and click" interface, and is supplemented with a variety of typical Sierra function key commands. The function keys give access to the sound on and off toggle, save and restore game menus and other game functions.

The use of sound effects and music were well done and allow for the use of the Atari ST MIDI port with a Roland MT-32 or Casio CZ-101 synthesizer for really spectacular sound. The graphics and animation are typical high quality Sierra and are very good, if not state of the art.

The copy protection is contained within the manual. The manual is required for a variety of information needed to play the game. Coded messages from CIA headquarters must be decoded with the decoder included with the documentation. The decoder is copy proof, as well as impossible to read for those with bad eyesight. Some with good eyesight may also have problems reading this decoder.

Iceman allows you to name your save games and also is easily modified to provide for unlimited save games. Inventory is apparently infinite also, making item management much easier. Dropped items are not lost and can be easily retrieved, as a part of the intelligent object management system.

In the final analysis, *Iceman* is more of an arcade adventure than the normal Sierra animated adventure. There are numerous arcade sequences that are not as difficult as Sierra's famous "Astro Chicken" sequence, but they are difficult for someone who is more familiar with rounded combat and avoids arcade games like the plague.

If you are looking for less arcade and more animated adventure, this game is not for you. The game has excellent animation graphics and sound. *Iceman* is a great submarine simulator, and has quick arcade sequences and quality Sierra features. Those who enjoy arcade adventures, Sierra animated adventures, and cryptograms using unreadable decoders will like this game.

[Code-Name: *Iceman*, Suggested Retail Price \$59.95, Sierra OnLine, Inc., Coarsegold, CA 93614-0200, 2096838989.]

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Life & Death

Can You Stomach Surgery?

by Mike Heininger (c) 1991

The Patient Is Ready, Doctor

A high school buddy of mine is a brain surgeon. He takes things out of people's heads. He drives a Porsche.

I'm a writer. I put things into people's heads. I drive an Omni.

My surgeon friend's toys are commemoratives; mine are close-outs. But while he works with life and death, I play at it: the stomach surgical simulation *Life & Death* from The Software Toolworks via Mindscape International.

The good news is I do more surgery in one hour than my friend does all day. The bad news is not one of my patients has thanked me for my work. They can't ("Halloween" movie theme crescendo) ... they all died!

Tough. It's a cruel world here in gameland. And I (demented laugh) am immune to malpractice litigation. No problem if I weren't; I'd just find a greedy lawyer simulation. When you overdose on vicarious, reality gets a little blurry.

Enjoy Dicing Frogs?

Leave now if you expect a serious review. What were you, an "A" student in biology? You enjoy dicing frogs? Get a thrill out of playing with paramecia? Then *Life & Death* is for you. Read no further; go buy it. Go on. Just do it.

But if you didn't spend sunny weekends classifying vermin with their Latin names, think twice before investing \$50 on an unabominable abdominal surgery simulator. Pay attention (you're already questionable surgeon material). I said UNabominable (never pass up a cheap play on words). *Life & Death* is OK. Hardly a barrel of laughs, but definitely smirk material if you're into smug.

It's kind of neat to play doctor, though not as much fun as when you were four years old and members of the opposite sex were mutually curious.

Life & Death is just as serious about its simulation as all the dandy war and space and fantasy games are about theirs. What? You need to speak privately with me? OK, I'm closing the door. Now what is the problem?

Not Much Gore

Oh! You nasty thing! No, there isn't much blood when you slice too deep. Yes, during examinations the patients moan and complain if you touch a tender spot. Yes, they tattle if you get clumsy or fresh. No, you can only play from collarbone to hip. No, this is not that kind of game. Privileged relationship aside, one more question like that and I notify the proper authorities (I never notify improper authorities).

Although *Life & Death* certainly meets any community's standards for avoidance of sex and violence, it doesn't take much imagination to envision using similar programs in the future to help identify potential serial killers. Give them the program, secretly monitor how they use it on their simulated patients, then tag an ear and put a radio collar on them if at least one of a hundred patients doesn't survive.

Corollary psychological testing could be equally simple--one question: Who is Bret Easton Ellis? Anyone identifying him as the author of *American Psycho* is immediately forever denied admission to any medical school or hardware store.

Stormin' Norman's Hammer Job

Why this fixation on nonexistent corollary features? Reviewers must consider not only what is but what might be. In this case, blame the extended what-ifs on the biography of General H. Norman Schwarzkopf (*Stormin' Norman An American Hero*) by Jack Anderson and Dale Van Atta, Zebra Books, 1991).

Before the age of computer simulation, young Norman allegedly reacted to the movie, "Geronimo," by hammering holes in the foreheads of his sisters' dolls and trying to scalp them (the dolls, not the sisters) [p. 16]. Well, boys will be boys. And generals will be generals. The point is, you've got to watch what stimulates what.

Anyway, *Life & Death* took its sweet time coming here from the DOS world. Who knows when or if the sequel (*Life & Death II, the Brain*) will get to Atariland. What is really irritating is realizing that while *Life & Death* retails solo for \$50, in DOS discount stores you can pick up a bundled collection of *Life & Death*, *Chuck Yeager's Advanced Flight Trainer*, *Airplane Factory*, *Chessmaster 2000*, and *Red Storm Rising* for about \$35! Mmnnn ... put down that cussing simulation disk.

Another Sneaky Code

Life & Death comes on three disks that are not copy-protected, but the program has a sneaky code in the guise of answering phone calls during the game. You get a two-page welcome letter for all first-term residents, a 19-page "Operating Procedures Manual & Diagnostic and Treatment Methods," plus a 24-page "The History of Surgery."

Play is essentially by mouse, with no dirty tricks. You sign in with the nurse in the main hall. She tells you where to go (either to class or to a patient's room). For you potential Freddys from "Nightmare on Elm Street," the manual advises: "Once you have signed in, the program will remember everything about you, even if you leave the hospital and come back to play another time." Swell, just like caller identification! No anonymity behind that surgical mask.

The classes refresh your medical memory. Remedial sessions are prompt and merciless whenever you screw up a diagnosis or an operation, meaning nearly every time.

To diagnose a patient you enter the room and read the patient's symptoms from the clipboard at the foot of the bed. Then (with your mouse, of course) click on the patient's body to see the torso close-up. Palpate around the torso and consider the patient's responses. End the physical by clicking on the bed covers.

Oh, Oh, Decision Time

Now you must order a treatment or more tests. Use the mouse to check one of several possible actions on the clipboard. Make sure you initial the correct space for the staff to do what you want.

If you decide to operate, go to the staff room and, from personnel records, select two assistants from the six available. In surgery, the mouse icon is shaped like a hand. Click on an instrument to pick it up. The mouse icon changes to the instrument icon. To put the instrument down, click on the operating tray.

Two drawers hold additional materials you will need. Don't expect to ad lib any diagnosis or operation. And if you decide to wing it anyway just to see how gory things can get, the program will kill off the patient and whisk you back to medical school remedial lectures faster than a drop of blood can hit the floor.

Life & Death is very particular about proper scrubbing and preparation, and the patients are prone to dying quickly if you don't pay attention to vital signs. Bottom line? Make friends with the pause key.

Terminology Pain

To succeed as a surgeon you must be comfortable with terms like the following that often are your only clues for reacting within seconds to life-threatening situations: appendicitis, bacterial infection, kidney stones, aneurysms, arthritis, ultrasonic scan, EKG, premature ventricular contraction (PVC), bradycardia,

systolic and diastolic blood pressure, IV, anaesthetic, rectus abdominus, linea alba, external oblique, transversus abdominus, preperitoneum, posperitoneum, incising, retracting, ligator, atropine, calculi, cecum, dopamine, embolism, glucose, heparin, lidocaine, thrombosis, ventricular fibrillation.

Having fun? Well, try regarding *Life & Death* as an aptitude screen that could save you thousands of dollars: if your kid doesn't thrive on this game, don't waste your money on medical school. On the other hand, if your progeny persists in prescribing the Texas Chainsaw Massacre for every tummy tremor, better lock up the cat and sleep with the light on.

The first sentence in *Life & Death*'s manual says: "Life & Death is a game for fun, not education." Join the crowd if you think it should be the other way around.

Available from The Software Toolworks via distribution by Mindscape International, The Coach House, Hooklands Estate, Scaynes Hill, West Sussex RH17 7 NG, phone 0444 831 761. Price around \$50. Requires mouse. Not copy-protected, but requires code wheel entry during game.

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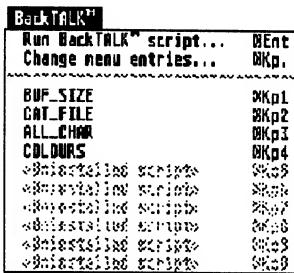
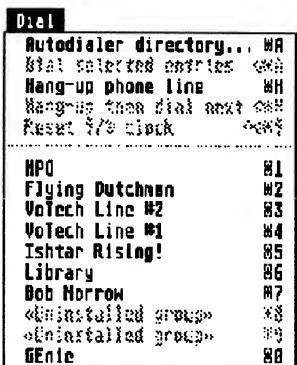
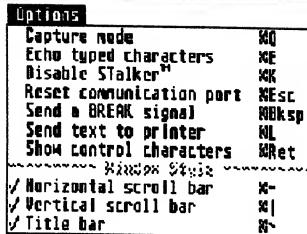
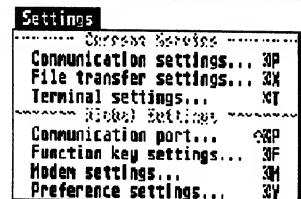
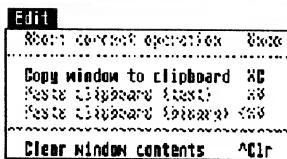
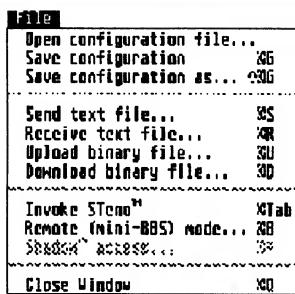
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Stalker 3.0

Review by Scott Dowdle

Stalker 3.0 was officially released on Saturday, September 14th at the Southern California Atari Computer Faire (aka The Glendale Show). *Stalker* is a *fantastic* terminal program written by Eric Rosenquist of Strata Software in Canada. Gribnif Software has exclusive marketing and distributing rights to both of Strata's products: *Stalker* and *Steno*. *Stalker* and *Steno* were, when marketed by Strata, a single package. Gribnif has seen fit, after having both programs upgraded, to split them up and release them separately. *Steno* has a few new features: the *much* requested "UNDO," page break indicators, more advanced line/character/word editing commands, a couple bug repairs, and a more advanced mouse selection routine. The changes to *Steno* seem minor when compared to *Stalker*, which got a major face lift. Some time ago I wrote a review of the Strata release of *Stalker 2.06* and *Steno 1.03* (published recently in the Sept. 91 issue of *Current Notes*) but a new review of *Stalker* is necessary to discuss the massive changes in the 3.0 release by Gribnif Software.

There were three things that I thought were missing in *Stalker 2.06*. All have been addressed with new features in the 3.0 release:

- A scripting language,
- ZModem file transfer protocol, and
- More terminal emulations.

BackTALK is the new included script language compiler and it can be run as either a program or a desk accessory (DA). It is based largely on the popular programming language compiler C. BackTALK is function oriented, has a similar syntax and structure. Anything from a simple logon sequence to a telecommunications specific application can be developed in this rich environment.

The ZModem file transfer protocol is now available, including full batch file transfer processing with many configurable parameters and flags including auto-resume and auto-detect. This is the most complete implementation of ZModem I have seen anywhere.

Optional GDOS font support has been added along with more complete emulations of the Atari VT-52, DEC VT-100, and IBM PC-ANSI terminals. Everyone knows that ST medium resolution is limited to 4 colors while ST high resolution is limited to 2 colors. So, the problem for any terminal program has been, "How do you display 8 color ANSI?" *Stalker* does some creative color mapping and any text sent using a non-available color will be translated into text using an available color with a different GEM text attribute (light, italic, bold, etc...). Of course, if you have a fancy graphics board or an Atari TT (TT medium resolution), you will get all of the colors.

Use of the included GDOS IBM-PC font, while in ANSI emulation, makes *Stalker*'s window look like an IBM display and this is the BEST ANSI emulation I have seen on the ST. There are some sample BackTALK scripts that will display the color mapping and complete character set so you can see how things are translated and what characters a GDOS font has without having to go online. *Stalker* still does not have all of the terminal emulations of Uniterm (a popular shareware program with a variety of terminal emulations being its main strength), but it definitely has gotten better.

About the Package

Stalker 3.0 comes with a printed manual, a registration card, and a double-sided disk. Two single-sided disks are available on request.

The documentation is a somewhat bulky (an excellent quality) 6" x 8 1/2" spiral bound, 228-page book, which is actually two manuals put together: one for *Stalker* and one for the BackTALK scripting language. Each manual comes complete with a Table of Contents and an Index. Both manuals are well written, understandable, and concise (kudos to Mike Cohan and Bob Goff). This documentation rates a 9.5 on a scale of 1 to 10 and it is definitely the best manual I have seen in a long while.

User Interface

Stalker can be run as a regular program or as a DA. Regardless of which way it is run, it has all of the GEM window elements as well as drop-down menus. "What? Drop-down menus in a desk accessory?!! They must be tainted and of poor quality, right?" "NO!" The only difference between *Stalker's* drop-down menus (when run as a DA) and those of a regular GEM program is that you must click on *Stalker's* menu bar to bring them to life, an element that many wish regular drop-downs had. When run as a program, the drop-down menus behave just like any other system drop-down menu, opening automatically when the mouse is moved over them. See page 52 for a look at *Stalker's* drop-down menus. Previous versions of *Stalker* didn't have drop-downs and relied on a pop-up menu.

Not only does *Stalker* fully support the GEM user interface, it takes it several steps further with the abilities to have or remove the window title bar, horizontal scroll bar, and/or vertical scroll bar. Even with any of these gadgets removed, the window can still be sized and scrolled. The new user interface on 3.0 really makes it more user friendly than ever before. Elegant, yes, that is the word I would use to describe *Stalker's* user interface; and it is obvious that Mr. Rosenquist put a lot of design and planning time into 3.0.

There are a few other programs included on the *Stalker* disk, but I'm leaving them out as a surprise for those who purchase the product.

Multi-Tasking—Two Types?

The first type of multi-tasking is background operation. When run as a DA, it does file transfers, text capturing or sending, compiled script execution, or dialing independent of the host GEM application. The *Stalker* window does not have to be open for it to continue its background operations; in fact, it is a little faster with it closed, since the CPU does not have to spend time updating the window display. Since DAs are only available within GEM programs, *Stalker* will only effectively run in the background from the Desktop or within a GEM-based program. Running a TOS or TTP program while doing a background operation can lead to unexpected results (like a timed-out transfer if you remain within the TOS or TTP

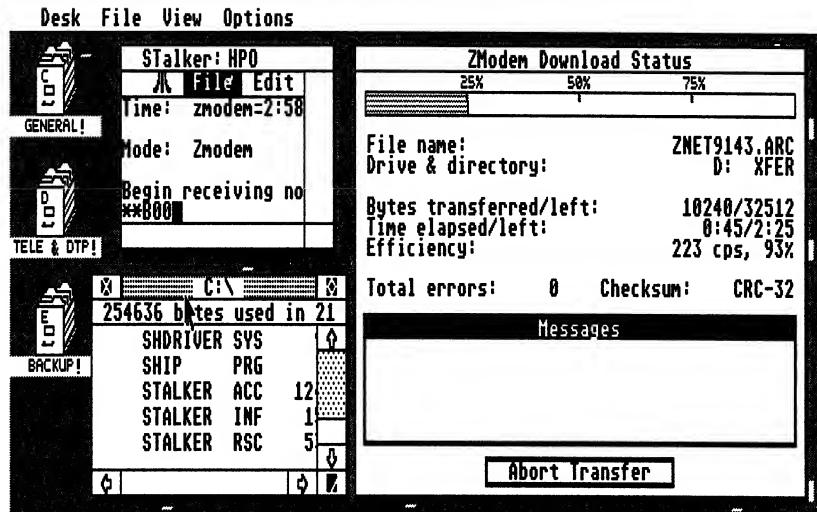


Figure 1. *Stalker's* window and the File Transfer Status box are completely independent. *Stalker's* window can be sized, but the File Transfer Status box can only be moved.

application too long) and doing things like changing resolutions from the Desktop are a no-no.

Generally speaking *Stalker* does a great job of operating in the background but some of the time I find myself operating it in the "foreground," so to speak, because there are some things that I would not want to do with *Stalker* running in the background. It is really dependent on whether the host GEM application will give DAs attention in every phase of their operation. For example, I wouldn't expect too much background operation while *PageStream* is printing. Let it be known that that is an extreme example to prove my point. If common sense is used, i.e. one doesn't try to overtax the system just to see if it can take it, background operation works rather nicely. I do not consider background operation to be *Stalker's* main strength because it has so many other excellent features.

Stalker has a second type of multi-tasking that applies whether it is run as a program or a DA. Many functions are still available while doing a file transfer, capturing or sending text, executing a compiled script, or dialing. What does this mean? Well, let's say that you are in the middle of a download and you want to do something else within *Stalker*. Simply move the File Transfer Status box out of the way (it is independent of the *Stalker's* window!) or click on the main window to make it the active window. See Figure 1.

File transfers are part of the "File" drop-down menu so "File" will be in inverse video to let you know that there

is a selected function that has not been completed yet. BUT you still have access to all of the drop down menus. Many options will be ghosted (non-selectable) but there are still several program commands that are available, including the ability to review your scroll-back buffer. I'm not going to review what options are available during whichever tasks, but my point is that *Stalker* has limited multi-tasking abilities within itself and that is more impressive to me than the background operations.

Stalker Features

Stalker has all of the features you would expect from any competent terminal program. OK, so what features does *Stalker* 3.0 have that make it stand out from the rest of the crowd? That's an easy question to answer. It has the multi-tasking abilities mentioned above. For those who use Double Click Software's background transfer utility *Shadow* (yes, you can still use it to do virtually anything and not disturb your transfer—run a TOS or TTP program, change resolutions, reset the computer, etc.), *Stalker* will even start and monitor *Shadow* transfers for you to effectively replace the *Shadow* terminal DA. For those who really want or need a more complete background transfer ability, *Shadowwins* hands down.

Stalker 3.0 is still the only terminal program that can be configured for different serial ports. This means that if you have an Atari TT or Mega STe, you will be able to access your extra serial ports. *Stalker* still supports third party

serial ports expanders such as Double Click Software's *DC-Port*, Gadgets by Small's *MegaTalk*, Beckemeyer Development Tools' *MT C Shell* tty drivers as well as the traditional MIDI port. See Figure 2 for a glance at *Stalker*'s Communication Port Dialog. What all of this means is that you can have multiple *Stalker* DAs loaded (and *Steno*, too, if you like) to have multiple online sessions just as long as you have the required hardware.

Stalker 3.0 has the best Autodialer I've seen. It can hold 30 entries with separate selections for Communication Settings, Terminal Emulation Settings, File Transfer Settings, Auto-logon Sequence, and Auto Execute BackTALK Script. If 30 entries are not enough for you, external dialer files can be saved and loaded at will. See Figure 3.

Stalker 3.0 has configurable function keys, lots of them, F1 – F10, and SHIFT F1 – SHIFT 10. If you want more function keys, they can also be externally saved and loaded at will. Function keys can be linked together, which is useful if a command or statement takes up more than one line. You hit one key and the others fall in behind it.

Stalker 3.0's BackTALK script language gives you more than just the ability to program extended Auto-Logon scripts. Because I'm not an experienced programmer, I can't give a real review of BackTALK (maybe J. Andrzej Wrotniak would be interested?). BackTALK is a very complete programming language with which complex scripts can be written. Roger Burrows, author of the LHA archiving utility, wrote a fully commented, 85-line script for viewing the contents of any .LZH file. Another example of a complex script leads to the next unique feature of *Stalker*.

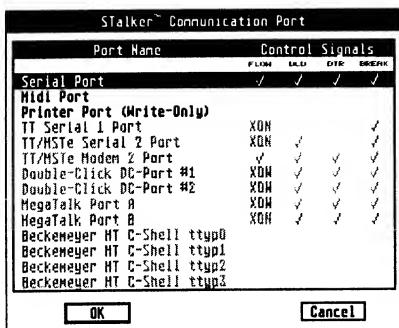


Figure 2. The Communication Port Dialog Box. Notice that unavailable hardware will ghost out on inappropriate choices.

Stalker 3.0 has a Remote Mode. Hitting ALT-B (or choosing the "Remote (mini-bbs) Mode... ALT-B" command from the "File" drop-down menu) brings up the dialog box seen in Figure 4. Remote Mode was basically designed so you can have Remote access to your machine.

In previous versions of *Stalker*, Remote Mode was built in, but starting with 3.0 the Remote Mode is now handled by a compiled BackTALK Script (REMOTE.BTK). With the BackTALK script for Remote Mode publicly available (REMOTE.BTS), it can be modified and enhanced (with adequate programming skill). Personally, I would like to see it expanded to handle more BBS functions such as message bases, and E-Mail. For an overview of the Remote Mode features, please refer to the *Stalker* review published in the Sept. 91 issue of *Current Notes*.

Stalker has a unique GEM communications pipeline with Strata's *Steno* text editor (again, for an overview refer to the previous review). *Stalker* has most popular file transfer protocols built in, including ZModem. The addition of ZModem to 3.0 is highly appreciated especially with all of the implemented options. What options? *Stalker* can do batch file transfers, including sub-directories and wildcards. These batch operations apply to both ZModem and YModem and are extremely configurable. The gist of this is that now batch uploads and downloads are correctly and easily handled!

Some Things Some People Don't Seem to Like...

Stalker is most effective when run as a DA. When configured with 100, 80 column lines, an 8K transfer buffer, and a 16K BackTALK script buffer, it uses

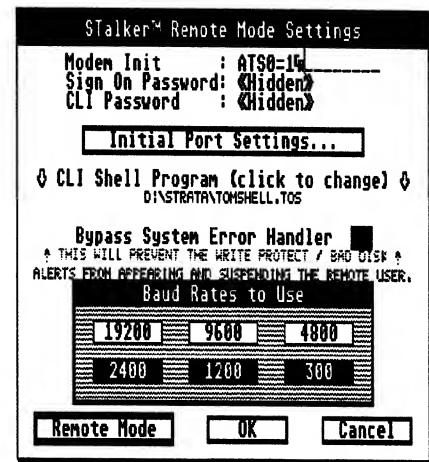


Figure 3. Autodialer Menu.

approximately 158K. Different configurations require different amounts of RAM. This can be a limiting factor depending on how much RAM you have and what GEM applications you want to run. Anything under 1MB isn't recommended for background operation.

As mentioned earlier, *Stalker* and *Steno* were designed to go together (they share an effective GEM pipeline communications link) and *Steno* is required to use *Stalker*'s "Capture mode ALT-O" command. Text can be cut and pasted between the two effortlessly.

Since Gribnif has split the two products apart, the following questions might arise. "How effective a terminal program is *Stalker* without *Steno*? Can one live without a traditional capture buffer?"

Because the "Capture mode ALT-O" command is non-selectable without *Steno*, it may appear that no capture mode is available; however, this is not true. *Stalker* has a user-definable GEM window scrollback buffer with configurable line (20–2000) and column (40–200) settings. The scrollback

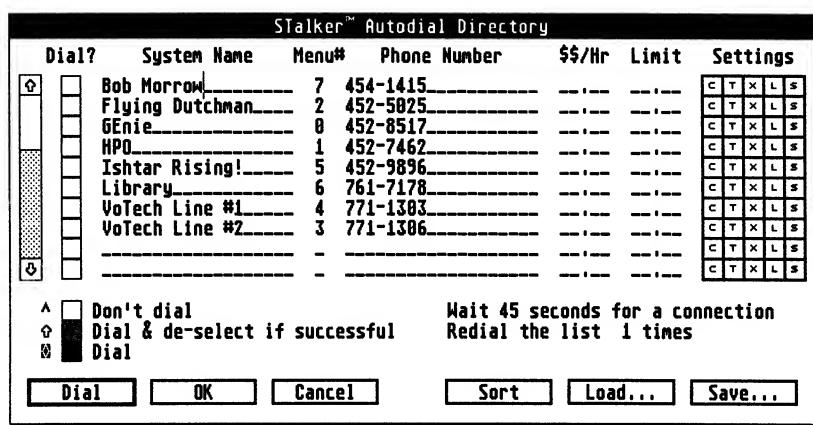


Figure 4. The Remote (mini-bbs) Mode configuration dialog.

buffer is a function of *Stalker's* GEM window and is always on, so, in a sense, a sized capture buffer is always on. The only functional difference between *Stalker's* scrollback buffer and *Steno* (being used as a capture buffer) is that *Steno* has editing features. Copy, Save, and transmit (paste) block functions are available in both.

Another method of Capturing input is *STalker's* "Receive text file... ALT-R" command used to send text straight to a disk file. If you don't own *Steno* and have no desire to purchase it, you can use any GEM text editor as a psudo-capture buffer. It won't be anywhere near as easy to use as *Steno*, but it can be done. Eric Rosenquist has mentioned that he will discuss the specifics of *Stalker's* GEM pipeline communications, so it is possible that popular text editor authors can update their products to included the *Stalker* communication compatibility. This would make it possible for other editors to communicate with *Stalker* as easily as *Steno* does.

Who Is *STalker* for?

Although *STalker 3.0* is a very complex application program filled with unique features and a C-like scripting language, it is still easy to learn and use. I would highly recommend it to any telecommunications hobbyist from beginner to expert. It has features that the expert can take advantage of, features that will still be there once the beginner becomes more experienced. If you are looking to buy your first terminal program, *STalker* is for you. If you are an old hand and have just about every free-ware, shareware, and commercial terminal program available for the Atari, you might want to give *STalker* a serious look. I'm a former die-hard *Flash* user and I'd never think of switching back now.

Availability

STalker 3.0 is available directly from Gribnif Software, your local dealer or through mailorder. Package upgrades are available only from Gribnif. The suggested retail prices are: *STalker 3*, \$49.95; *Steno 2.0*, \$29.95; *STalker 3 Upgrade*, \$25; *Steno 2.0 Upgrade*, \$15; *STalker 3 & Steno 2.0 together Upgrade*, \$35. Gribnif Software P.O. Box 350 Hadley, MA 01035 Tel: (413) 584-7887 Fax: (413) 584-2565

STalker™ 3

GEM Based Telecommunications Software
for the Atari ST/TT and Compatibles

<img alt="Screenshot of the STalker 3 software interface running in a GEM window. The window title is 'STalker™: Genie 031:24'. The menu bar includes 'Desk', 'File', 'Edit', 'Settings', 'Options', 'Dial', 'BackTALK', and 'Help'. The 'File' menu has sub-options like 'FLOPPY DISK' and 'FLOPPY DISK'. The 'Edit' menu has 'Genie Logon at 04:34 EDT on 9/10/91' and 'Last Access at 04:03 EDT on 9/10/91'. The 'Settings' menu has 'No letters waiting'. The 'Options' menu has 'Capture mode', 'Echo typed characters', 'Disable STalker™', 'Reset communication port', 'Send a BREAK signal', 'Send text to printer', 'Show control characters', and 'Horizontal scroll bar', 'Vertical scroll bar', 'Title bar'. The 'Dial' menu has 'Port 1', 'Baud 1200', 'Relay 1', 'Relay 2', 'Relay 3', 'Relay 4', 'Relay 5', 'Relay 6', 'Relay 7', 'Relay 8', 'Relay 9', 'Relay 10', 'Relay 11', 'Relay 12', 'Relay 13', 'Relay 14', 'Relay 15', 'Relay 16', 'Relay 17', 'Relay 18', 'Relay 19', 'Relay 20', 'Relay 21', 'Relay 22', 'Relay 23', 'Relay 24', 'Relay 25', 'Relay 26', 'Relay 27', 'Relay 28', 'Relay 29', 'Relay 30', 'Relay 31', 'Relay 32', 'Relay 33', 'Relay 34', 'Relay 35', 'Relay 36', 'Relay 37', 'Relay 38', 'Relay 39', 'Relay 40', 'Relay 41', 'Relay 42', 'Relay 43', 'Relay 44', 'Relay 45', 'Relay 46', 'Relay 47', 'Relay 48', 'Relay 49', 'Relay 50', 'Relay 51', 'Relay 52', 'Relay 53', 'Relay 54', 'Relay 55', 'Relay 56', 'Relay 57', 'Relay 58', 'Relay 59', 'Relay 60', 'Relay 61', 'Relay 62', 'Relay 63', 'Relay 64', 'Relay 65', 'Relay 66', 'Relay 67', 'Relay 68', 'Relay 69', 'Relay 70', 'Relay 71', 'Relay 72', 'Relay 73', 'Relay 74', 'Relay 75', 'Relay 76', 'Relay 77', 'Relay 78', 'Relay 79', 'Relay 80', 'Relay 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Elvira - Mistress of the Dark

Or Fifty Ways to Lose Your Liver

Review by Joe Sapienza

Job Opening

"... Elvira, Elvira, my heart's on fire, for Elvira!" That line from the country song of the same name kept playing in my head as I applied for the job at Castle Killbragant. Elvira, the Queen of Horror (and "B" grade movies) needed help, and I was just the guy to give it to her! The way the want ad read, her castle needed "a thorough cleaning out." As I came to realize, a mop and a full bottle of Mr. Clean wasn't going to cut it! Elvira was recently bequeathed her Great-Great Grandma Emelda's castle. Unfortun-ately, thanks to the meddling of her Black Magic and an evil wizard named Beremond, Castle Killbragant is now, shall we say, "infested." Unearthly beasties, ghouls, soldier skeletons, and things that go "bump" in the night now patrol the grounds. Their mission: "Bump off" any intruders (whether it's night or not!) from interfering with the return of Emelda from the dead. One heck of a job to apply for, but as long as I'm here, I might as well exchange my broom and rubber gloves for a sword and some magic spells. Who knows? I may yet be able to clean up the place and "exterminate" the problem. Since I was the only one who applied, I got the job. Elvira said she was hoping for someone a little taller, maybe with armor and a sword. Instead, she got "a computer freak who keeps trying to tell me that swords and spells are no match for a trusty two-button mouse—I'll believe it when I see it!" Shall we proceed?

Elvira-Mistress of the Dark is Accolade's new graphic adventure game, presenting you with the opportunity to help Elvira rid her castle of Emelda and her goons. Scattered throughout the many locations of Castle Killbragant are seven gold keys and an ancient chest. As you roam the castle grounds searching for weapons and magical ingredients, you will gain experience by defeating all the adversaries you find (or that find YOU!) Before you enter Emelda's hidden throne room, correctly use the keys to open the chest and arm yourself with the necessary items to bring about her defeat.

Turn On the Tube

As you may be aware, the ST/MEGA computer line is capable of some outstanding graphics. For this reason, many games make statements of having top-notch graphics. Unfortunately, not all programs make good with their goals. Very fortunately, Elvira's touts of "sizzling," "outstanding," and "stunning" graphics

meet and exceed the bill. With a first person perspective, each step of your way through the program's 800 locations (more on this later) offers screens dripping with atmosphere, realism, and attention to detail.

Changing Channels

The game is completely icon driven, with the only keyboard requirements being the typing of game save names. Your color screen is divided into three main sections; various control and informational items can be accessed within these areas. Most of the upper two-thirds of the screen is filled with your window out to the castle settings. To the left of this are the directional arrows that control your character's movements--up, down, left, right, forward, and backward. To the right, a list of action verbs such as OPEN, CLOSE, UNLOCK, EXAMINE, and USE, that will help you in completing your quest. Others, like SAVE, PAUSE, and RESTORE, will assist you in completing the game. Below this is a status bar, which displays numerical information on strength, skill, experience, and the like. The bottom one-third of the screen is your inventory window, displaying the various items you discover and can use. This also doubles as a text window, where information on items, your surroundings, and dialogs are displayed.

Where the Action Is

There are several ways to gain experience and dispose of your enemies. The first, and easiest, is simply to run away. Discretion is the better part of valor ... and sometimes the better part of survival, too! If you have a magic spell or a range weapon, these can be utilized if acted on before the combat screen comes up. Depending on the strength of your foe and what you throw against him/it, you may or may not enter the third mode, the combat screen. Hand-to-hand combat is actuated with whatever weapon you had previously selected. Once in this mode, it's a fight to the death - preferably not yours! Two attack moves, LUNGE and HACK are available, regardless of the weapon selected. Likewise, two defensive options BLOCK and PARRY help save your skin. The computer switches you between offense and defense depending on the options you choose, and the timing that you choose them. The excellent 22 page manual, both functional and fun reading, gives a good run down on the combat procedures and how to use the magic spells.

What's Cookin'?

While Elvira has many assets to her credit, two, in particular, are most notable—her unmistakable hairdo and her ability to cook up some helpful magical concoctions. (And just what two assets, may I ask, did you think I meant??) These seem to have been handed down through generations of the female lines. (Yes, I'm still talking about the above mentioned assets—regardless of where your mind may be taking you!) First locate Emelda's "Receipts & Spelles For Ye Of Magickal Artes" cookbook, along with the prescribed herbs and ingredients. A copy of this tome is included with the program. This recipe book, atmospherically written in Old English, describes the ingredients, amounts, and general usage of 25 different spells. The side quest of finding these ingredients is just as important as your main one; the various spells available will greatly aid you to your goal. Return to Elvira in the kitchen and have her MIX the recipes you request with the ingredients you allocate to her. The animation sequences that show her culinary expertise are great!

I Gotta See Me

At game boot-up, an amusing animation sequence brings you to a spot where you can begin. It is only at this time that you will see "yourself"; from then on, the game is presented in a first person point of view. Well ... not exactly. You DO get to see yourself, or at least parts of yourself, when you die (which is quite often! I wasn't kidding when I mentioned "killer" graphics!) I hate to say it, but at first, I enjoyed dying! As the subtitle should have led you to believe, the program has many deaths waiting for you, each with its own graphic depiction of your demise! (Not for the young or squeamish, this one.) In fact, the only "death" I didn't experience was "my heart on fire, for Elvira." Head bashed in, eyeballs plucked, vampire bites, and drowning—these untimely demises, and more, sought to prevent my quest from being a success. Sheesh! A day in the life of a hero!

Interaction

As you move around the grounds via the directional arrows, click on any items or locations you see. Descriptions and/or information about what you clicked

on may then become revealed to you on the text area of your play screen; the odd clue or hint may also be given in this manner. If a held mouse click on an object changes the arrow cursor to one in the shape of a hand, it is an indication of your ability to pick up that item and add it to your inventory. (e.g. herbs, keys, weapons, etc..) You may also drop items by doing the reverse. Note that an item dropped in any given location will stay there until you pick it back up again. While you can carry a lot, sometimes finding a safe place to unload can be beneficial if your strength is down. (Hint: click on, and try to pick up, everything. You never know what you'll learn or find hidden under another item.)

Barring the fact of Elvira's figure, other considerations are the different colored tunics of the various attackers you will fight. The color changes aren't one of

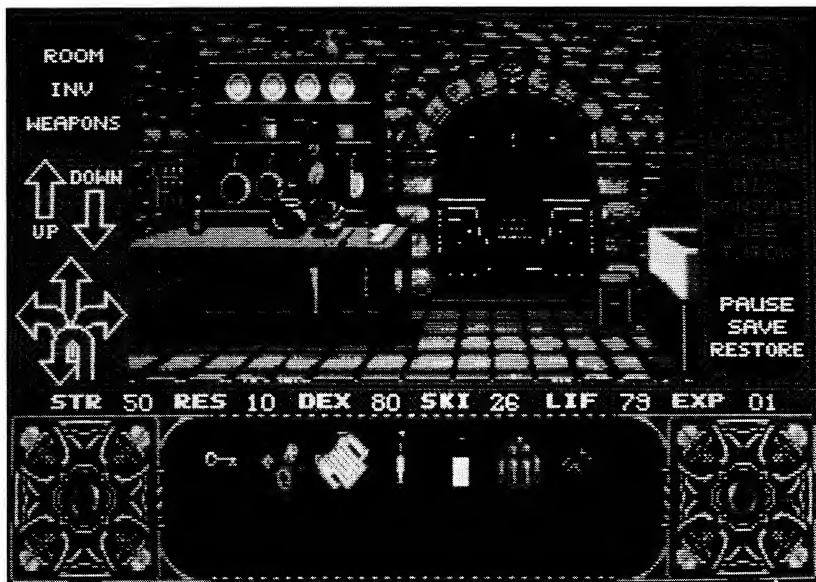
taste, but of levels of expertise and power—a blue soldier is harder to beat than a green soldier. Some goons can only be defeated with certain weapons or magic spells, which is often times a trial and error situation. In the combat/attack modes, hit points are displayed for both you and the bad guy, with separate display areas for magic and non-magic scoring.

Game saves and re-

stores can be actuated at any point except during a combat sequence (remember, to the death!) All digitized sounds and the music scores (which can be toggled off) were appropriate and added to the gameplay.

Every Silver Lining Must Have a Cloud

Hand to hand combat was not an easy task to accomplish (a reflection of truth, I guess), and split second timing was required to decide whether to BLOCK or PARRY, as blood squirts from whichever of the two of you who got sliced! Another thing is the acquisition of items. Once "grabbed," some disappeared off the screen and into your inventory, while others (graphically) "stayed" on the screen, but really were in your possession. I think it should have been consistent one way or the other for all items. A final irritant was the way some spells operated. For example, the Freeze Enemy and Knockout Spells didn't (but it did slow 'em down!), and the Total Protection charm did not work in all situations. While I know that part of the fun is



figuring out what works where, I still expected the mechanics to be consistent.

Hard Drivable

You may believe that sub-heading to be something Elvira might, in some fashion, use as a conversation opener. For the moment, let's focus (enunciate, please) on the fact that this program is best played from a hard drive. *Mistress of the Dark* comes to you on five double-sided disks; the swapping of floppies and/or loading of graphics from the A drive would noticeably chop up the continuity of game play. Floppy drive users will also need to have a formatted game save disk ready. You are allowed as many game saves as you have room on the disk, or inside the Elvira folder on your hard drive. Each save must be given a name or description. The disks are not copy protected, so back ups and hard drive installation is no problem. The game employs a protection scheme that centers on the Recipe Book. Printed in light blue and red, your copy of the spellbook requires a red acetate lens to read the required ingredients, which you then give to Elvira. Three wrong attempts will get you a quick chewing out by your now angered (ex)employer, who will boot you out (of the game) and begin again in a search of a new hero.

You Say Potato, I Say...

Within the documentation I received was a "Game Features" sheet. Touting the various aspects of the game, a portion reads, "Nearly 800 different locations, including mazes, battlements, moats, catacombs, and Elvira's bedroom" ... "Find and use more than 300 weapons, herbs, and scrolls." Hmm... let me clarify that. In traversing the grounds, you will delight in screen after screen of those "stunning" graphics mentioned earlier, with many of the screens and/or close up shots employing some great animation. In most screens you will be able to turn to face forward, backward, left and right. This ability gives a true sense of being there, as you can view your surroundings from these various perspectives. I think these four perspectives of the same "spot" are what the developers are adding up to equal 800. Also, I found many items to pick up, but nowhere near 300 of them! Perhaps the Amiga and/or IBM PC versions are different--the documentation and package screen shots were all from these machines, and none from the Atari.

Four Meg BUG!

By accident, I discovered a major bug in this program. This only seems to affect four meg machines. When I first started playing the game, it was on my stock 1040 ST. Two-thirds of the way into the game, I upgraded to four megs. Much to my surprise and horror (Elvira would probably have been pleased), the

game continually crashed at random times with two bombs. This also occurred on my local dealer's machine. According to Jeff Randall of Randall's Home Computers (yeah, it's a plug, but our local dealers need all the recognition we can give them!), it seems to be a memory addressing problem. I talked to a service rep from Accolade who informed me that they had just begun to get inquiries on this matter. He said they would try to contact the programmers; I gave him my name and number but haven't heard from them yet. Jeff is working on a fix as well. In the meantime, I completed the game successfully using The Juggler II program, and booting my computer as a two meg unit.

"B" Grade Movies, Grade "A" Fun

Elvira was a fun play! While you may or may not glean the "100+ hours of intense game play" stated in the feature page, you will get a colorful, graphic intensive computer game that'll keep you looking around the next corner. Help Elvira find her chest (ahem!), defeat Emelda with the Scroll of Spiritual Master, and win the queen of horror's undying appreciation (and Lord knows what else). Pop up some popcorn, grab a soda, and don't wait for the Late Late Show!

[Elvira, Mistress of the Dark Designed by Horror Soft Ltd. Distributed by Accolade Retail \$59.95.]

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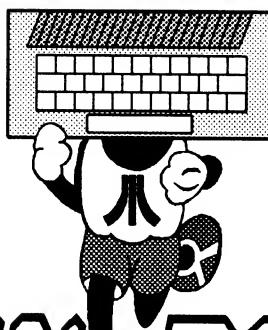
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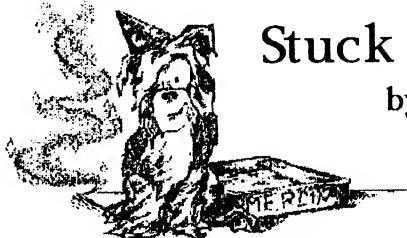
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Stuck in a Rut

by Sam Wright

It's a slow season for ST adventures, and it gets slower every year. Even the ST's staunchest supporters, Sierra and Lucasfilm, release their adventure games for MS-DOS machines first before converting to the ST, as if to test the games' marketability before taking a risk with the ST. It's not just adventure games, either. Action and arcade games are also drying up domestically, but at least they have European imports to fall back on. Adventurers looking for new challenges are stuck in a rut, so to speak.

Thus, I thought we'd take a dip into the archives with an antique (in the adventure business, two years is ancient) game that still holds up today: Softek International Limited and Epyx's *Devon Aire in the Hidden Diamond Caper*.

Devon Aire more resembles an adventure than an arcade/action game, but it contains elements of both. The plot is the old adventure axiom of finding treasure and then escaping with your life.

You, a reformed cat burglar, have been hired by the widow Crutchfield to search her 50-room manor for 16 diamonds hidden by her late husband Montague. Why he hid them is anyone's guess, but there must be a reason why he's booby-trapped the rooms containing the diamonds. Could it be? Maybe he didn't want anyone to find them. Maybe they're better off not being found. Maybe they're...CURSED! Maybe it would ruin his reputation if the SECRET of the diamonds were revealed!

And what of Lady Crutchfield, continually pacing in her room? Why does she never leave? Why does she never sleep? And why are there only pictures of her in the house? And what about the mysterious grandfather clocks, which don't work, yet either display 4 o'clock or 8 o'clock? What is the significance of these two numbers?

Fortunately, *Devon Aire* answers none of these. What did you expect, *The Colonel's Bequest*? No, instead, you have a nice, simple action adventure game where you find the jewels, return them individually to Lady Crutchfield, and then find a way out (preferably with a key... and your life).

You control Devon through the keyboard or joystick and keyboard. Besides basic movement (controlled by the arrow keys or joystick), you can jump, pick up and drop things, and push things forward and backward. With some creative combinations, you'll

Devon Aire in the Hidden Diamond Caper

soon be climbing furniture and scaling walls of bookcases.

Thoroughly hidden throughout the mansion, the jewels aren't really that tough to find; getting them is what's difficult. For instance, one diamond is hidden beneath something. Since you can't bend down or push the thing out of the way (it's too heavy), how do you pick it up? It takes some ingenuity (and lots of hairs pulled from your head) to come up with the answers. Little touches like these give *Devon Aire* its beguiling, if frustrating, charm.

The graphics are excellent. Each three-dimensional room is geometrically shaped like a diamond (where going north is really northeast and south is southwest) and takes awhile to get used to (the joystick, rotated to a diamond angle, is easier to control than the arrow keys). Inside the room are detailed representations of what should be in that room (furniture, artwork, bookcases, beds, etc.). A multitude of manipulatable objects (books, phones, plates, champagne glasses and bottles, fruit, flowers, lamps, candlestick holders, and many more) are also present, ready for the taking.

The point of view is third-person, like standard animated adventure games, which *Devon Aire* gleefully takes advantage of. Occasionally (too often for me) you'll find yourself behind walls and trapped in corners. You won't be able to see where you are, just hear your footsteps. Being caught in these blindspots is just as bad as walking around in the dark (and there is a secret catacomb maze which is dark, although not so dark that you can't see).

Some of the tougher puzzles (which I maintain can't be solved) are the rooms with tables blocking exits. With just enough space between two tables to move them all away from an exit, it almost looks like you can do it. But it's hopeless. As if to taunt you, there'll be a much-needed object underneath one of the tables (remember, you can't bend down or crawl). Forget mapping and rely on your memory for what's in what room and where each room is. You'll have a much easier time finding your way around. Things could be worse; the rooms could all be randomly arranged!

To further complicate matters, and what distinguishes *Devon Aire* as more an action game, is your three-life limit. A strength bar is at the lower left

along with your remaining lives. As time passes, bits of your strength ebb until you lose a life. Strength can be restored by downing goblets of juice found around the mansion, usually placed in out-of-the-reach places near the diamonds (note that you're able to stack things to extend your reach). Picking up a goblet is the same as drinking it, so reserve touching them until the last minute.

Worst of all are the experiments Lord Montague was working on before he died. Mice and birds that once innocently roamed the house have been mutated into evil, giant pig-mice and plump, killer canaries. These bloated pets will be in your way at every moment. All at once, they will foil your attempts at moving furniture around in strategic positions, gnaw at you until you die, and have you cursing at their blaring oinks and chirps. Just what was Lord Montague thinking?

As the flimsy documentation (a four-page pamphlet) describes, you'll find objects to counteract the mutants' attacks. Once you leave the room, however, the mutants will be back to their hungry selves. If there's a room that you need to do something in and it's inhabited by a pig-mouse, move all the objects you need into that room and then subdue the creature. It won't come after you again until you leave the room and come back.

The telephone, of all things, is a handy deterrent against the animals. When it rings, pick it up. The dial tone acts as a repellent against them (they will still joyfully move furniture around and out of your way, however). Perhaps the mutants are courteous enough to leave you alone while you're talking on the phone (even though whoever called hung up). The magical dial tone, which seems to be random in length, will also ward off fire, immunize you to the poisonous plants, and keep your strength from weakening. Always stay near a phone!

Fortunately, games can be saved. I had a succession of saved games, numbering them in relation to how many diamonds I had returned. Each saved game always comprised the maximum strength and maximum lives I could manage (you'll soon find you'll have to give up at least one of your lives for a diamond). This was possible because I didn't save the games where I practiced, stacking things randomly to see which combination worked best, finding the quickest ways around the mutant beasts, and locating the shortest paths between the diamonds and Lady Montague. Points against saving games is when the phone rings. When it does and you pick it up, DO NOT save your game. If you restore it, you'll find the dial tone gone. Instead, set up what you need to do (create easy escapes, move the toxic trees out of the way, arrange furniture for easy climbing) while the dial tone is still there and, when it disappears, save the game.

With its simple interface and straightforward goal,

Devon Aire is a welcome respite from the traditional shoot-'em-ups or strategy games where you have to think too much. *Devon Aire* will lure you into playing just enough for you to realize how hard it is. By then, of course, it's too late. You'll already be hooked.

Devon Aire has been sitting on my shelf for over two years, collecting dust. But booting it up recently and hearing the first squawks of the canaries and metallic grunts of the pig-mice brought everything back--the frustration, the cursing, the dreams of mephitic pig-mice. And the fun. And, I admit, I still wasn't able to recover all of the gems, much less find out how to get through the locked front door. Now you know why I stick with adventure games! Here's hoping you have better luck.

Devon Aire (\$49.95, but can be found for more than half off at discount mail-order places), from Softek International Limited and distributed by Epyx, runs on all color Atari STs and comes on one single-sided, copy-protected disk. Saved games take up 7,344 bytes each and can be saved directly on the game disk (not recommended). The game loads completely into memory, so use a blank disk for saved games. It cannot be run from a hard drive.

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THE • ELIEMOUSE COMPLIMENTARY • COLORING BOOK

Review
by Bill
Moes

Eliemouse Complimentary Coloring Book is a low-resolution computer coloring book for young children. The central character, Eliemouse, was designed by the software's author. That cute character is, as its name aptly tells us, a cross between an elephant and a mouse.

The program is mouse-driven and should be easily used by the targeted audience. The program disk has 13 pictures to color. They can be loaded by clicking on LOAD or by simply pressing the "L" key. With LOAD, GEM's standard file selector box will appear. Perhaps more suitable for youngsters, a press on [L] will immediately load the next sequentially numbered screen for coloring.

Individual colors are selected with a click on the color dot. Another click and the chosen picture area will be filled with that color.

If a mistake has been made, a click on the asterisk [*] key will change the area back to the previous color. It probably would have been better if the [UNDO] key had been programmed for this activity, rather than the confusing choice of the asterisk.

If things aren't going well with the coloring, a tap on the keypad's plus [+] key will remove all color from the drawing. If the [L] key had

been used to load the drawing, this key will restore the screen to the previous picture as well.

Again, there are probably other keys that would be easier for a child to remember, although, in defense of their use, they are both located along the right edge of the ST's number pad, next to the mouse. These last two features (asterisk and plus keys) are not listed on the menu screen; the child will need to be told about them.

Completed pictures may be saved by selecting SAVE from the menu or by simply pressing [S]. The use of the menu's SAVE will bring up the file selector where a name must be chosen for the save. The use of the quick-save [S] will save the screen under a default

title, so a subsequent save with the [S] key will overwrite the previous file.

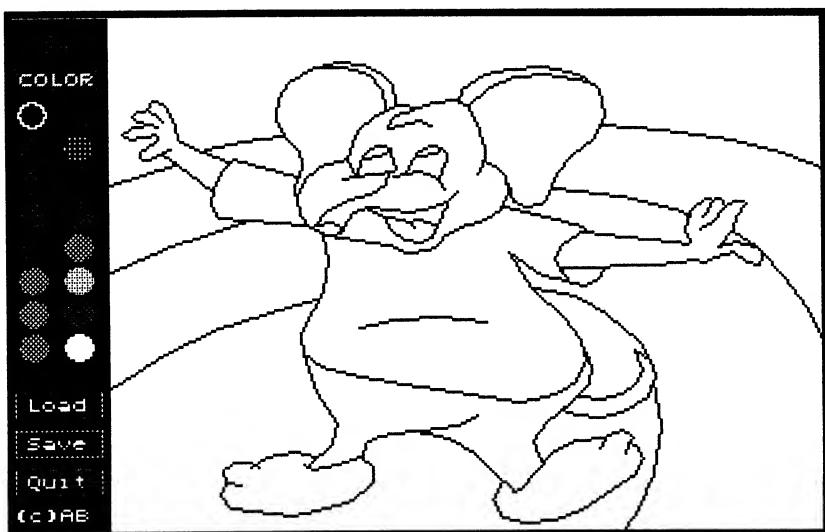
To quit the program, either click on QUIT or use the short-cut, a press on the [Q] key.

Eliemouse Complimentary Coloring Book is basic software for young children. The standard version comes on a double-sided disk, although it's also available on a single-sided disk. The disk-based documentation (1,530 words) explains the features. At its rock-bottom price (\$6.00 ppd.), it's hard to get too upset at any shortcomings or lack of features.

The program's author, Albert Baggetta, has put together quite a library of his original software for the ST. In addition to this coloring book, he is marketing a program on Shakespeare's sonnets (\$11 ppd.), a database for comic book collections (\$11 ppd.), an electronic storybook starring Eliemouse (\$13 ppd.), a disk holding a variety of games and applications (\$6 ppd.), and a collection of low resolution clip art (\$6 ppd.).

Mr. Baggetta has had articles and programs published in the major Atari magazines. In a future issue of *Current Notes*, we'll take a look at his program on Shakespeare's sonnets.

[Albert Baggetta, P. O. Box 759, Agawam, MA 01001]



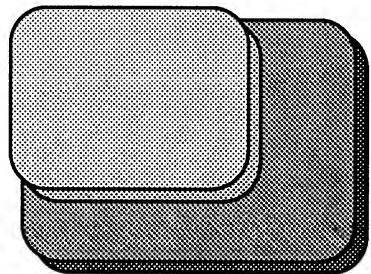
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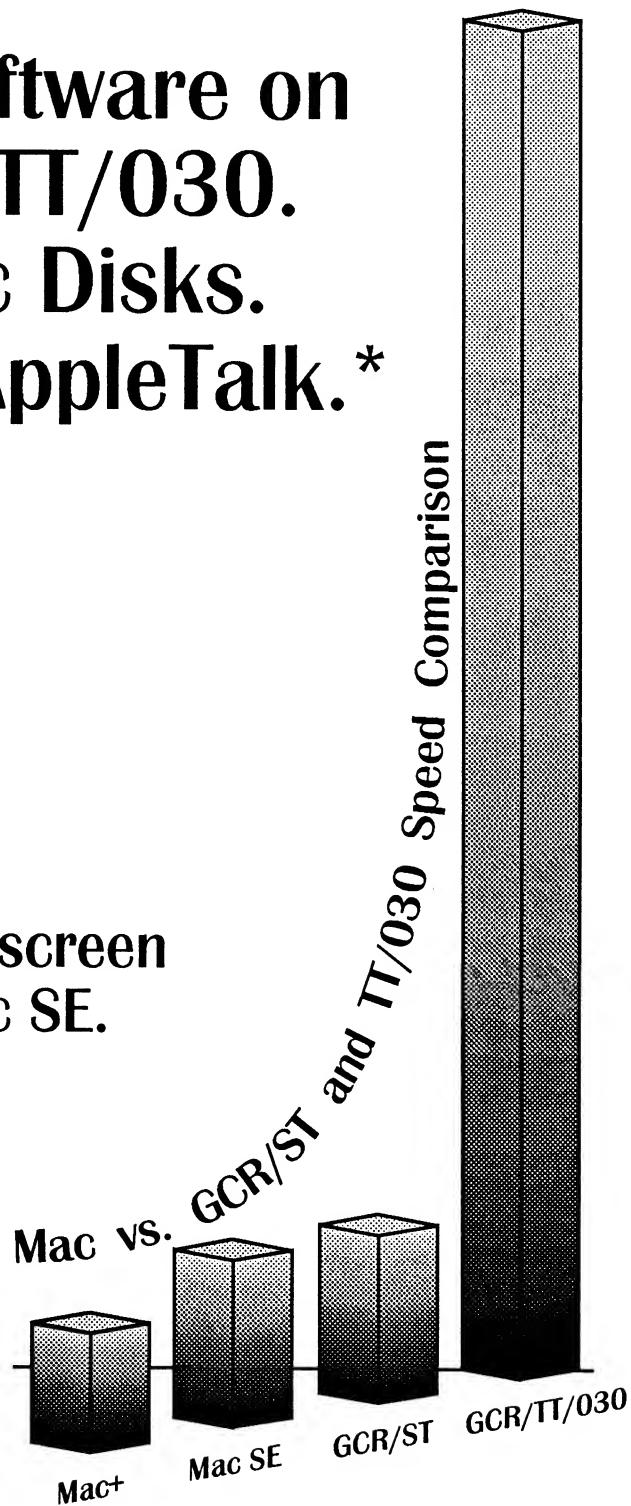
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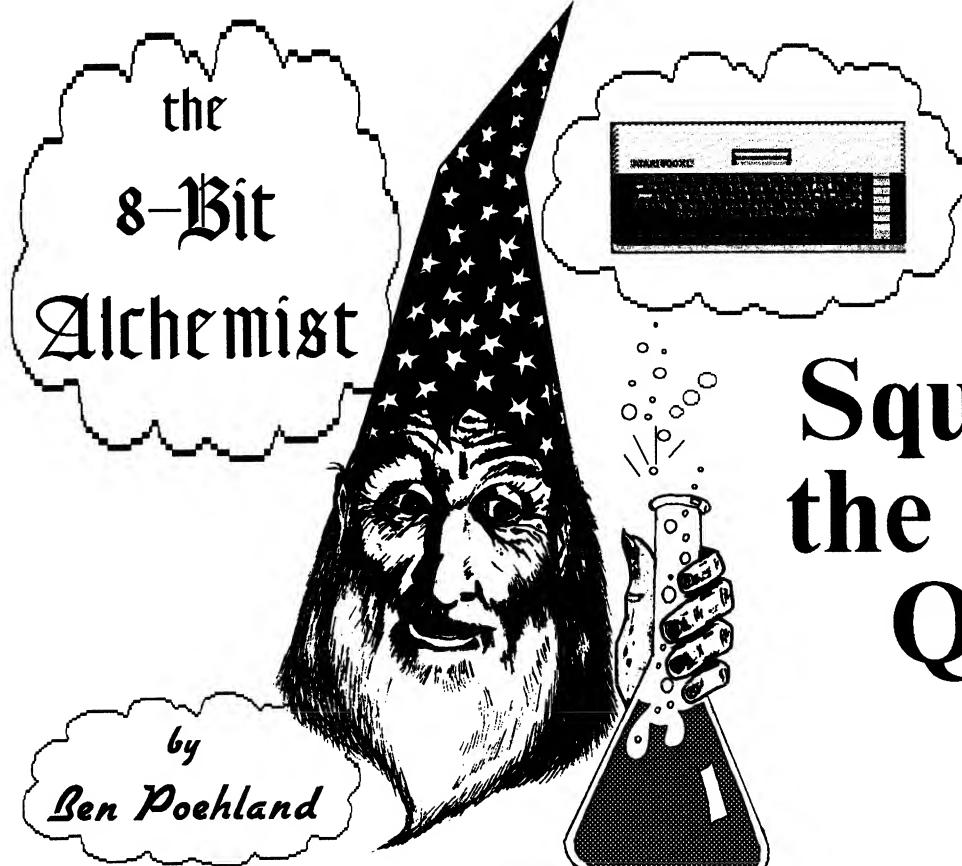


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the 8-Bit Alchemist

by
Ben Poehland

Squeezing the Beauty Queen

Part II

Squeezing the Beauty Queen

A year ago, in the November 1990 issue of *Current Notes*, I published a detailed article describing the Atari 8-bit power supplies. In my notes on the Type I supply, upon which I conferred the sobriquet "Beauty Queen," I observed there were screened locations on the circuit board for parts Atari apparently deleted. Those extra parts were for a heftier version of the Type I that I promised to describe in a future article.

Last month I presented the promised rebuild of the Type I, using a design that closely approximates what Atari's original designers had planned before small minds intervened with slashing red pens. The upgrade was presented in two versions: plain vanilla and deluxe (basically, just the plain version with added parts.) Whichever version you use, you will have squeezed 45% more power from your Beauty Queen. This month, I will finish up with some explanations, for the technically inclined,

on how the squeeze works and give you my final perspectives.

How the Squeeze Works

For you tech phreaks, refer to the Figure 1 schematic from the November issue as I run through the secrets of this upgrade. The big ceramic cap Cd serves several purposes: it protects the rectifier diodes against high-voltage spikes induced in the transformer secondary windings when power is removed and also attenuates any voltage spikes, glitches, or RF trash that sneak through the transformer from the AC line. The fuse protects the AC line and rectifier components from catastrophic overdrafts of current, such as a short circuit occurring elsewhere in the power supply or in the computer itself (as happens when people spill coffee into computers).

The four small capacitors C105-C108 bypass any RF noise to ground, including junction noise generated by the rectifiers. The four big rectifier diodes CR101-104

convert the 60Hz 10VAC from the transformer to pulsating 120Hz 14VDC. These diodes have a current surge rating of 400 amperes, which means they will withstand any insult short of a direct lightning strike. The pulsating DC is "smoothed" by the large capacitor C104 to give a raw unregulated steady-state DC supply of 12-13 volts.

Now we come to the interesting part. The 7805 regulator U102 is connected in a bootstrap configuration with the transistor U101 such that the output *voltage* of the circuit is controlled by the 7805 while the output *current* is shared equally by both the regulator and the transistor. Since the regulator by itself can deliver a maximum of 1.5A, in theory, the circuit could deliver up to 3 amperes. However, R104-105 limit the available current to around 2 amps. A lower value of R104-105 would permit more current to be drawn from the output, but at the risk of burning up the power transformer. Resistor R103

limits the base current fed to the transistor.

All the characteristics of the output, with the exception of current, are attributable to the 7805. So the output still enjoys the built-in thermal protection, safety features and shutdown behavior of the regulator. The transistor is slaved to the regulator and follows whatever the regulator does. Those among you possessed of sharp minds and keen memories might be wondering whether this arrangement bears the same potential for disaster as the master-slave configuration in Atari's Type IV ("Peanut") supply I described last year.

The answer is No. In the Type IV supply, a 723 IC feeds regulated voltage to an output transistor which handles all the current: a collector-to-emitter short could pass 10VDC into the computer and blow it up. In the Squeezed Queen, a collector-to-emitter short in U101 passing 12VDC to the output would instantly destroy the 7805. Large currents would pass through U101 and U102 while the output voltage would drop to around 1.1V (typical for a blown 7805). This would cause the fuse to blow within a few seconds. The computer would see a brief (several milliseconds?) 12V spike—which is survivable—followed by a sharp drop in supply voltage. The regulator still bears ultimate responsibility for protecting the computer and will give its life for the computer if it has to.

The main function of R104-105 is to divide the current between the transistor and the regulator so they share the load—and the resulting thermal stress—equally. Diode CR105 is placed in the lower arm of the current divider to compensate for the emitter-base junction voltage drop in U101 and maintain the balance between the upper and lower arms. On the output side of the 7805, R101-102 provide a slight boost to the nominal +5V regulated output voltage. The reason for boosting the voltage is to compensate for re-

sistive losses occurring in the output cable, which typically run 50-200mV depending upon how heavy a load the computer draws. The small capacitors C101-103 filter RF hash from the DC line and stabilize the operation of the regulator, while the small inductor L101 provides additional RF hash suppression.

The additional components in the Deluxe upgrade provide improved noise performance plus increased survivability in the face of disastrous events. Capacitors Ca and Cc provide additional RF filtering, while Cb improves the ripple-rejection characteristics of the regulator. "Ripple" is residual 60- or 120Hz AC that rides along the DC output in virtually all AC/DC power supplies. You can't completely eliminate it, but you can reduce it to such a low level your computer won't see it. A 7805 is capable of 80dB of ripple rejection but typically only delivers about 70dB. Adding Cb squeezes the last ounce of ripple rejection from the regulator so it delivers the full 80dB. Once you add Ca, however, you *must* add the diode D1. Discharge currents from Ca could damage the 7805, but D1 prevents this. Finally, D2 protects U101-102 from damage due to a sudden short-circuit on the input side of the regulator that momentarily results in the output being at a higher potential than the input. This would be a catastrophic event involving sudden failure of C104 or components in the rectifier circuit.

Final Perspectives

From a production cost point of view, the expensive items in the Type I supply are the cables, plastic case, circuit board, heatsink, filter capacitor, and transformer. Atari removed U101, CR105, resistors R103-105 and capacitors C101-103 from the original power supply design when they went to market with the XL machines. True, there was probably no point in their making the supply beefier than it

had to be. The stock Beauty Queen delivers 1.4 amps, more than enough for a stock 800XL. The omission of C102 was inexcusable; its removal threatens the RF stability of the design and violates the basic engineering rules governing fixed 3-terminal regulators.

What I find perplexing is the sheer small-mindedness of it. Shaving those eight parts could not have reduced the production cost of the supply by more than 5%, since all the deleted parts were small items. The heavy-duty heatsink designed for two thermal-dissipating devices was obviously an expensive part that *someone* paid for but whose capacity was largely squandered when the transistor was eliminated from the design. Atari could have left those few extra parts in the design and given us a much more rugged and reliable unit with but little damage to the corporate treasury. Someone at Atari was obviously annoyed at the manufacturing costs of power supplies, or else they wouldn't have changed the design so often (they should've stuck with the Type III, it was the most cost-efficient). One can only speculate what Atari did with the money they saved by shaving production costs for power supplies. Certainly those funds never found their way to the advertising budget!

Tunnel vision as a cornerstone of Atari's corporate culture began with the departure of Ray Kassar in 1983. His successor, James Morgan, was the quintessential corporate bean-counter. Kassar was a flamboyant, albeit fiscally irresponsible, visionary; Morgan went to the opposite extreme and slashed everything Kassar created: the planned 1400, 1450 and 1600XL computers, 1090 CP/M module, and gosh knows what else. During his short reign—which lasted less than a year before succumbing to the Tramiel Entente in 1984—he pushed the 600 and 800XL machines to full production while cutting the company's overhead and squeezing its retailers. I'm inclined

to believe the missing parts in the Type I power supply, and probably the missing video components in the 600XL as well, constitute part of Morgan's pathetic legacy to the Atari 8-bit community.

The Alchemist has something in common with Jim Morgan: we once both worked for the same company, Philip Morris Tobacco. That was in my younger days, before I understood how evil that industry truly is. My departure from Philip Morris in 1977 was less than cordial; I never adapted to the bizarre environment there. As an executive, Jim Morgan had helped create that environment. I first became aware of Morgan's presence at Atari from an interview with him published by James Capparell in the March 1984 issue of *ANTIC*. Morgan presented himself well, having served a long apprenticeship in the plastic corridors of Wall Street. After only a few months at Atari he was an "expert," making grandiose gestures and marvelous pontifications about Atari's products and the future of the computer industry in general.

But Jim didn't own an Atari computer, and even said so in print! He didn't use any type of home computer and saw no reason to do so since he had a personal secretary to do all his stuff for him. I wondered how it was possible to manage a computer company with no firsthand knowledge of computers. It was my first inkling that Atari was a company with a troubled soul.

Postscript

On November 3, 1991, my home was damaged by fire (faulty masonry in the chimney ignited studs inside a wall). Not only did I escape the blaze unharmed, I fought it with a garden hose before the fire department arrived and managed to save most of the structure. I was extremely lucky. Damage to my personal possessions was minor, and none of my computer equipment was damaged. Even so, preliminary estimates of the repair bill are in the range of \$30,000. My insurance company is treating me well, and I'm confident the homeostasis of my existence will eventually be restored.

On November 4, I contacted Joyce Waters to let *CN* know I would be unable to fulfill my commitments as 8-bit Editor of the magazine after the December issue. I wish to make it perfectly clear that my resignation is due solely to the change in my personal circumstances wrought by the fire, and not by any events prior to Nov. 3. I have no idea when The Alchemist will again grace these pages, if at all.

All the projects/manuscripts I had in the works are indefinitely suspended, my plans to attend the Chicago Fest are cancelled. I'm presently laboring under great difficulty to get out the 8-bit material for this issue. Demolition/reconstruction is scheduled to commence about the middle of November, after which time I'll only answer the most critical postal mail. I'll

try to maintain a presence on INTERNET and GEnie as long as possible.

I wish to thank the many people who sent cards, letters, and E-mail expressing their concern and support. I can't answer these personally, but I take great comfort knowing there are so many people out there rooting for me. I'm also grateful for the many kind offers of assistance, though fortunately I really don't need any. Except for someone to take over as 8-bit Editor...

Insofar as this will likely be my last article for a very long time, I'll leave you with the thoughts that are uppermost in my mind. Beginning 1992, the Atari 8-bit community will be a community of orphans, shunned by the very company that spawned the machines we still cherish. If we are to survive as a viable entity, we need to grow up and stand independent of Atari Corporation and the ST/TT community. We need our own forum, something to replace *ANTIC*, that will serve as a primary channel for the 8-bit community to focus its user/developer/vendor resources free of the intimidating influence of the ST market. Our vendor community needs to abandon its laid-back attitudes and pursue the market more aggressively, with print media advertising, distribution of product catalogs, and appearances at shows. Our programming community needs to shuck off its tired old venue of videogames and cutesey utilities and produce a wide range of novel user-oriented applications software such as the Commodore/Apple communities enjoy. It is the serious users who will keep our machine alive, and programs written for the narcissistic pleasure of other programmers just won't cut it any more. Heed now these last words of The Alchemist, that we may save ourselves from oblivion.

Good-bye everyone, and God Bless.

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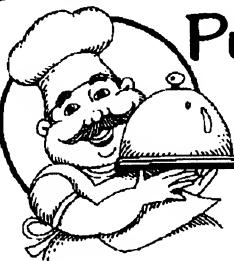
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Public Domain Potpourri

by Brian Miller

The ST Is a Great Music Machine!

The '91 WAACE Fest

The 1991 Washington Area AtariFest is over for another year. I am sure the Fest will be covered in depth on other pages of *Current Notes*, so I'll spare you a rambling commentary of that day's events. However, I can not resist the urge to offer a few observations.

I must begin by applauding the efforts of those who worked so hard to plan the AtariFest. I thoroughly enjoyed myself, and the Fest helped to restore my dwindling faith in the Atari ST. As I wandered from one booth to another, I was struck by the impressive capabilities of our often bashed computer. I found myself irresistibly drawn to many tables by enticing animations complete with full orchestral musical scores. Though I expected to find the powerful Atari TT responsible for these visual and auditory treats, a humble 520 or 1040 ST was more often the driving force behind these lavish productions.

The AtariFest provided an excellent opportunity for vendors and developers to hawk their newest wares. More than a few of the shareware authors whose programs I have mentioned to you drew considerable attention from the crowd.

Our own Joe Waters manned the *Current Notes* table, busy renewing subscriptions, and hopefully signed up at least a few new customers. If you enjoy *Current Notes*, but have been relying on the generosity of a friend for your monthly fix of news and reviews, please consider joining the ranks of many satisfied *Current Notes* subscribers. With your patronage, *Current Notes* will avoid the fate of other ST publications, and continue to serve as a worthy source of news, information and hundreds of shareware

and public domain programs in its ample library.

Accompanist

Some issues back, I devoted a column to describe software applications that can tap the ST's built in MIDI capability. For the price of two MIDI cables and an inexpensive MIDI keyboard, you can dazzle yourself and friends with the ST's inherent capacity to make music. I would like to revisit that topic again.

During the AtariFest, I was drawn like a magnet time and again to the MIDI Room. On my first visit, I witnessed a lively and entertaining presentation highlighting the features of one sequencing program. A sequencer is roughly equivalent to a multi-track tape recorder. In a scant few minutes the presenter, who claimed to be a novice keyboard player, was able to create a respectable musical arrangement from the sheet music for a familiar song. Though he had previously created some of the background tracks before his demonstration, he was able to tap out the melody of the song with one hand while he used the mouse to work through the program's features with the other.

Though he could have fooled me, he claimed to botch one section of the melody. The sequencer allowed him to "Quantize" that section so that it would play back in the same meter as the rest of the melody. Though the quantized portion was precise, it lacked the expressive quality of the rest of the song. He "humanized" the section by using the "Randomizing" option. While quantization provides absolute precision, it often sounds a bit mechanical. Randomization restores a human quality to the melody

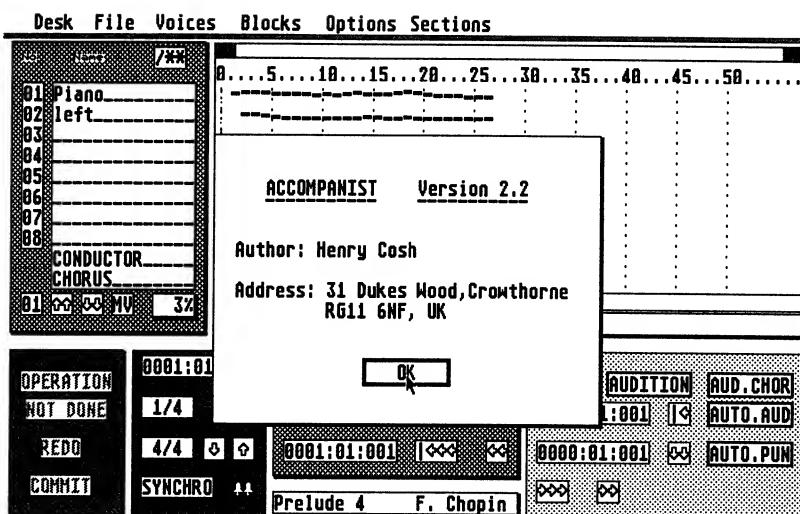
by varying the section slightly and randomly, more in the way that we humans would play, and likely enjoy, a song.

As he finished his demonstration, I braced myself for the cost of the sequencer. After all, the sky is the limit for sequencing programs. Though you can find a decent sequencer for under \$100, you can easily spend thousands for a full featured program. When the demonstrator announced to his admiring audience that he had been using a shareware sequencer, I almost fell out of my seat. I was frankly astonished that our entertaining friend had been able to accomplish all he had with the shareware program written by UK author Henry Cosh. If you would like to try the program, you need look no further than the *Current Notes* Library. Version 2.2 of the program can be found on Library disk #466.

I included an earlier version of this program in my overview of MIDI software a while back. Since writing that column, Henry Cosh has released version 2.2 of his program.

I have since purchased the *Tiger Cub* sequencer by Dr. T. While I am still no expert in the use of sequencing programs, I have gained at least some familiarity in using sequencing software. I have liked *Tiger Cub* because it is an intuitive program to use. Even without instructions, you can often figure out how to accomplish a task.

I would judge the *Accompanist* written by Henry Cosh to be an intuitive program to use as well. You select many options from the familiar GEM overhead menu bar. However, you can record and play back music on the 16 available tracks by choosing the appropriate options from the on-screen menu.



The program is released with an on-disk manual, so you should have no trouble working through the more advanced features of the program. The instructions are well written, and can be used as a guide for someone who has yet to purchase a MIDI instrument. Mr. Cosh provides some valuable pointers on that topic. The *Accompanist* includes two songs which use the ST's sound chip, so you can try the program before you commit to the purchase of an instrument.

Mr. Cosh has written a more sophisticated version of his program that you can also order, although version 2.2 should be more than sufficient to get you started. If you have ever given any thought to using your ST's MIDI capability then I would highly recommend you give *Accompanist* a try.

Alchimie, Jr.

If you are a comparison shopper, then you might also want to check out *Current Notes* Library Disk #527-D. On it you will find another shareware sequencer named *Alchimie Jr.* This program, written by French author Donique Canevesi, is packed with many features. The program makes use of the overhead GEM menu, but also includes a number of graphic icons, as well. You can initiate a variety of actions by dragging a selection to the appropriate icon.

The program includes a manual and a quick start document. While the program is highly polished, the documentation is a bit rough around the

edges. The author clues you in from the beginning that English is definitely a "second" language, and promises us the next version of the manual will be better written, though I suspect somewhat less colorful. I really had no difficulty following the manual and found the tortured writing style quite humorous to read.

I considered *Alchimie* more daunting to use than the Cosh sequencer. I was able to figure out how to record and play back music tracks without having to read the instructions of the *Accompanist*. In contrast, I am still struggling to use *Alchimie Jr.* after having read the quick start document. This is not to say that *Alchimie Jr.* isn't as good as *Accompanist*. In my opinion at least, it is somewhat more difficult to figure out.

Commercial Demos

After you have developed a level of comfort using sequencing software, you may decide that you need a commercial product after all. Before parting with your hard earned money, you should give some thought to checking out one of the commercial demo's available in the *Current Notes* Library.

You can find a demo for the *Sonus Superscore* program on CN library disk #327-D. *Sonus Superscore* is both a sequencer and a musical score writer. The program employs GDOS, letting you choose from a wide variety of font styles and sizes. With GDOS, the quality of the printed sheet music is excellent. The Demo program has enough of its features

enabled that you can develop a good feel for the program. I'd advise you against creating your masterpiece with the demo, since the save option is disabled.

You may have read all of this and thought to yourself, "I like music, but I have no interest in learning to use a sequencer." Does this mean you are up the proverbial creek without a paddle? Heavens No! CN Disk # 527-D also includes the program *Name This Song*. This game is patterned after the once popular T.V. game show which bore a similar title.

While the game recommends a synthesizer, it isn't absolutely required. You will need to have a color monitor, since the game runs in medium resolution. You will also need to use two joysticks, which your ST can accommodate with its one free joystick port, and by exchanging your mouse with another joystick while you play the game. Finally, you will need to load song data before playing. These data files can be found on a variety of bulletin boards. CN Library disks #528 and #529-D contain more than enough music data files to give you hours of enjoyment.

While I feel I covered quite a bit of musical ground, you really "ain't heard nothing yet.." Next time you read *Current Notes*, check out the magazine's Library Directory. I think you may be amazed at how much music shareware and demo software is available for your ST.

To Fest or not to Fest, that is the Question!

Before closing for another month, I would beg your indulgence for one additional observation about the AtariFest. I must confess that I approached this year's FESTivities with a great deal of reluctance.

In part, my lack of enthusiasm was due to the ST's less than certain future. Another reason for my hesitation had nothing to do with Atari, but a lot to do with the sedentary nature of my existence. I can't adequately convey how difficult it is for me to leave the comfort of my family room sofa on a Saturday morning.

Desk View Fonction Events Config

Songs		
Nr	Name	Length
001	POLONAIS	0016/00/00
002		
003		

Patterns			
Nr	Name	Length	Sign
001	PARTIE1	0004/00/00	03/04
002	PARTIE2	0012/00/00	03/04
003			
004			
005			
006			
007			
008			
009			

Filter

PRINTER DISK STACK TRASH

Alchimie JR 0000/00/00

Tracks

Nr	Name	Notes	P	S	Ch	Trp	Vol	Dur
001	DROITE	00019	-	-	**	+000	+000	100
002	GAUCHE	00016	J	-	**	+000	+000	100
003		00008	J	-	**	+000	+000	100
004		00008	J	-	**	+000	+000	100
005		00008	J	-	**	+000	+000	100
006		00008	J	-	**	+000	+000	100
007		00008	J	-	**	+000	+000	100
008		00008	J	-	**	+000	+000	100
009		00008	J	-	**	+000	+000	100
010		00008	J	-	**	+000	+000	100
011		00008	J	-	**	+000	+000	100
012		00008	J	-	**	+000	+000	100
013		00008	J	-	**	+000	+000	100
014		00008	J	-	**	+000	+000	100

ETH1 0000/00/00 J=120 04/04

STOP 0100/00/00 LEAP CYCLE

P-IN 0000/00/00 SYNCHRO

P-OUT 0000/00/00 PUNCH AUTO REC

Solo AUTO <>

Week after week, I watch with total fascination as artist Bob Ross creates beautiful landscape paintings from a series of "little-doers and happy accidents." I stare at my T.V. set with equal intensity while Jeff Smith, a.k.a the "Frugal Gourmet," tries to convince his viewers that cow's tongue, squid, and thymus gland are culinary delicacies. I have always thought of these items as your better crab baits, but the "Frug" does his best to show you what a little gravy can do.

Why then would I forgo the sublime enjoyment of my normal Saturday routine for the confusion, noise and chaos that is so much a part of any computer show? Believe me, that's the question I asked as I pried myself from the couch and steeled myself for the perilous drive to the AtariFest. As I played bump cars with Saturday shoppers, I reflected on my elementary school study of the Baltimore Catechism. It asserts that man, unlike other animals is born with free will. I can choose to sin or not to sin, to be or not to be, or to go to the Fest or not go to the Fest. So why was I playing chicken with thousands of other motorists, when I would rather be home hypnotized by my T.V.?

It was only after I made it to the AtariFest, that I was able to resolve this burning question. As I walked from my car to the hotel, I decided the Baltimore Catechism had it all wrong. Man, or Atari users at least, are not

noble creatures blessed with the gift of free will. I spied license plates from New York, Ohio, South and North Carolina, Maine and even Canada. In that brief trek across the parking lot I realized that for all our pomp and circumstance, we hold a much closer kinship to salmon, the swallows of Capistrano, pilot whales and lemmings than we do with Angels. I contend that we are driven to attend AtariFests, and remain blindly loyal to our machine out of some instinctive need or genetic hard coding. For those who would argue that our allegiance to Atari is a matter of choice, I say Poppy-Cock. I'd urge you to toss aside your Catechism book, and pay heed to Darwin's Origin of Species. I know this must sound like heresy, but who said the truth is easy to swallow. Just keep in mind what the one Pilot whale said to his friend, "Life's a beach, and then you die."

No matter how gloomy the Atari news may be in the coming year, I have little doubt that I will attend the next AtariFest. I am sure I will have a good time. But just to be on the safe side, I will keep my *Current Notes* badge tucked away in my pocket. For who knows, someone reading this may have taken me seriously, and take steps to reduce the number of contributing writers for *Current Notes* by one.

Well until we next swim upstream, Take Care!

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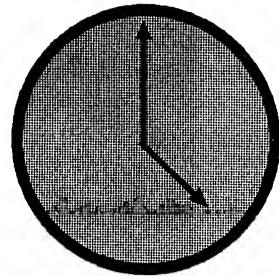


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Kalamazoo, MI 49009
(616) 372-5972, ext 313

Forget-Me-Clock II

No Wiring, No Soldering

Reviewed by John Godbey



The Forget-Me-Clock is a device which will automatically set the internal clock on your ST computers when you boot up. Its big advantage over other clocks is that its installation does not require opening the case of your computer, or any wiring or soldering.

The Forget-Me-Clock is a cartridge that plugs into the cartridge port of the ST. But it does not tie up your port—it has a full cartridge pass through.

It comes with the clock itself, and a disk with two programs. Installation is simple. Turn off the power to your ST. Plug the cartridge into the cartridge port. (When installed, the cartridge protrudes 1 5/8 inches from the side of the computer.) Next, run an included program that allows you to set both the time and the date of the cartridge clock.

Once you have set the clock, you can forget it. It will keep running until the battery in the cartridge gives out. You can remove the cartridge from the port and it continues to run. When you replace it later, it will still have the correct time. (However, if you want to turn the clock off—for example, to preserve battery life if your computer won't be in use for an extended time, it is easily done with the provided software.)

The second program included with the clock is copied to the auto folder in the root directory of your boot disk (either floppy or hard). Now, whenever you turn on your computer, or reboot it, this program will automatically set the time and date of the system clock. Then, any of your

programs which read or use the system clock will automatically have the correct time and date available.

The only precaution you must take is to place the autorun program in your directory before any other programs that might use the clock. For example, if you want *Hotwire* to show the correct time, the Forget-Me-Clock must set the system time before *Hotwire* runs, and for this to happen *autofmc.prg* must be in the AUTO folder before *hotwire.prg*.

I have had the Forget-Me-Clock installed in my computer for several months, have had no problems, and have found no incompatibilities between it and other programs. However, I have not tested the "pass through" feature of the port.

The convenience of being able to use commands in programs, like *LDW Power* and *dBMan*, that automatically print the time, makes the clock well worth its price to me.

[The Forget-Me-Clock II, Frontier Software, England, \$49.95.]

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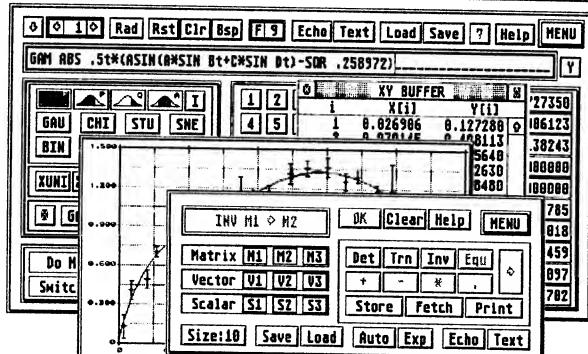
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Owners of older versions who do not wish to upgrade to v.2.0. may update their copies to v.1.4 (no differential equations).

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Compatibility: All programs run on any Atari ST, Mega, STE, or TT, color or monochrome. Moniterm and TOS 1.6 OK. All except El Cal 1.4 need 1 MByte of RAM.

Prices as shown above include shipping, and will definitely go up sooner or later. When ordering two products, deduct \$6, and \$4 for each next. Outside continental US add \$5 per order. Utah residents please add sales tax.

Updates: first one free, then \$5 each. **Upgrades** to El Cal 2.0: \$20 (foreign \$22).

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Yes, Dear Professor, Work Can Be EZ-er

by Bob Ledbetter

A teacher's work is never done, or so it seems. I'm married to one, therefore, I speak from experience. However, thanks to folks like Walt Lukow, Sr. and Brent A. McKim, there are EZ ways to do the necessary chores of your chosen profession-testing and keeping results.

Walt Lukow, Sr. has written a couple of programs which make the testing times of your life a little simpler. *EZ-Test Writer* and *EZ-Tester*. Brent A. McKim has a little jewel which makes result-keeping user friendly. *EZ-Grade*.

These three GEMs really make a teacher's life, not to mention the

life of the spouses (spice?), more livable.

Having Something to Grade

You must have a test before you can have a grade, so we'll look at *EZ-Test Writer* and *EZ-Tester* first. As the name implies, *EZ-Test Writer* helps you write your tests. Using an ST with a minimum 520K, with or without a hard drive, and either a color or monochrome monitor, you write the questions, decide which format to use (multiple guess, True/False, Essay, or Fill-In) and *EZ-Test Writer* does the rest.

You can have up to 500 questions per test (oh, don't you dare!) When it comes time for the print-out, you must have an Epson FX85, HP LaserJet or compatible printer. If there are classrooms where you, the prof, would like to have a couple of different tests with the same questions, *EZ-Test Writer* will do that for you. You simply tell it to "mix questions" during the printing phase, and voila, you'll have a test or quiz printed with a code on the top right of each paper indicating the code mix number and test file name. The answer key will also be printed out with the same code for the related test or quiz.

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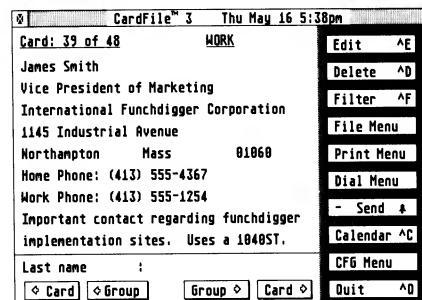
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Now, for those of you with an ST within student's reach at school (oh, it must be rough!) doing make-up exams has never been EZ-er. Just get the nifty little companion program, tell *EZ-Tester* which test/quiz you would like to have administered, how much time the student has to complete it, from 15 to 120 minutes, press **RETURN** and go about your business. When time has expired, or the student has finished, a couple of key-clicks and you have the student's name, date, time, and grade. All the student has to do is enter his/her name and answer the questions.

Truly, Teacher

Truly, testing has never been EZ-er, for you. Enter now, the grade-book program, *EZ-Grade* by Brent A. McKim. The same set-up as above is required and away you go. Once you have your classes and student names entered (up to 60 students per class) the rest is quite natural. If you have more than 60 students in a class, we will all remember you in our prayers, and you should break those classes up into groups of 60 or fewer.

As you are entering data, *EZ-Grade* wants to know if the grade is to be for Homework, Quiz, Laboratory, Test, Miscellaneous, or Extra-Credit. You also enter the possible points for each particular grade and the student's name. Not to worry about making mistakes. They can be edited at several places in the entire scheme of things.

This program, in fact all three of these programs, are a pleasure to use, and the only caveat I have is for *EZ-Grade*. It does not remember which class you are working on, so when you tell it to save a set of entries you must remember the overall file name. That's not as difficult as it sounds as each class name is Top, Center of the class screen and is visible even with the larger UIS III interface.

It Does It All

So, what will *EZ-Grade* do other than hold on to your grades? Well, here's the list: progress reports, one step grade curving, drop lowest scores option, complete statistics, grade weighting, interactive histograms, flexible grading scales, monitor class absences, gradebook print-outs, view class data graphically, freely re-order class data.

With the exception of the caveat I mentioned a few phrases back, I have to give high marks for all of

these programs. They truly make a teacher's work much EZ-er. My wife says she can't live without *EZ-Grade*. Geez, she told me that when we were first married.

EZ-Test Writer and EZ-Tester are available from W. A. Lukow software Development, PO. Box 2742, Lehigh Valley, PA 18001-2742, (215) 439-1651. EZ-Grade is distributed by BeerysBit Software A.S.C., 8174 Century circle East Suite 8, Indianapolis, IN 46260, (317) 872-8622.

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Longevity

Only for Those Who Want to Live (almost) Forever.

By Sam Van Wyck

Just about the time you read this article in *Current Notes*, I will be preparing to celebrate or at least mark my sixtieth birthday. Now I don't know how all you readers feel about it but a while back I seem to remember thinking that people who were 60 were OLD. Today, as I approach that milestone, I can confidently state that my earlier perception was entirely correct. We are. Since it is now impossible to avoid becoming OLD, attention must be turned to becoming OLDER.

Nag, Nag, Nag!

Longevity can be a very uncomfortable program. It tells me much about myself that I really don't want to hear. It suggests I do things that I don't want to do. In fact, it inspires that nagging little voice called *Good Sense* which, in concert with *Conscience*, conspires to rob me of many of the pleasures I'd hoped to enjoy while growing older. Step along with me while we take a short tour of *Longevity*.

Do you want to know what your ideal weight might be? *Longevity* will be happy to tell you exactly how many pounds (or Kg) you are over. Do you smoke? *Longevity* will gladly estimate exactly how many years you are cutting from your allotted span and what it costs for the privilege. How about blood pressure and cholesterol? *Longevity* will show you graphically just how much additional risk these and other factors add to your chances of becoming another statistic for the American Heart Association's next fund drive.

If you are at all serious about these and a number of other factors involving your personal health and longevity, this is a program that could literally do you a world of good. All you have to do is listen to YOUR small voices of Conscience and Good Sense. (Why should I suffer alone?)

A Look Inside

Longevity is the product of two doctors, Ron and Kathy Schaefer and their company, Schaefer Supergraphics. Both have published in medical journals as well as in ATARI oriented magazines. The program covers 24 items, most of which are self-explanatory. Here's what it can do for you:

- 1) Calculate daily caloric requirements based on age, sex, height and weight.
- 2) Calculate exact caloric needs to either gain or lose weight over any specified length of time.
- 3) Calculate your Ideal Body Weight and compare it to your own weight, with medical advice on the significance of the difference.

- 4) Calculate exactly how many calories are burned in performing 20 different popular athletic activities.
- 5) Determine your target pulse rate to obtain the maximum benefit from exercise.
- 6) Calculate what your ideal nutritionally balanced diet should consist of in terms of calories or grams of carbohydrates, protein and fats.
- 7) Menu planner and calorie counter with a user expandable list of over 300 food items. Allows you to plan a nutritionally balanced menu with the click of a mouse for a meal, a day or a week at a time. The menu list may be printed.
- 8) Average life expectancy graph.
- 9) Suicide, alcohol and drug addiction potential and associated health risks.
- 10) Smoking health risks, cost and how to quit.
- 11) The association of cholesterol and heart disease.
- 12) Exercise components, recommended durations and frequencies.
- 13) Aerobic training schedule with recommended levels of advancement broken down for healthy people and those having already had a heart attack or heart disease.
- 14) Standards of excellence in strength as tested by sit-ups and push-ups categorized by age and sex.
- 15) Information on vitamins: daily requirements, their dietary sources and functions.
- 16) The four food groups as a way of attaining a nutritionally balanced, healthy diet.
- 17) Weight calendar. Plot your weight vs. time to see your progression in a weight loss program or chart your infant's growth. May be saved or printed.
- 18) The leading ten causes of death broken down by age and sex.
- 19) Information on AIDS: definition of the disease, theoretical spread, viral structure, prevention, relative risks by age, sex and risk factors.
- 20) The leading causes of cancer broken down by age and sex; ways of reducing your risks of dying from cancer including the American Cancer Society's recommendations for cancer screening.
- 21) Immunization schedule for adults and information on vaccinations required by some foreign countries.
- 22) Calculate the relative risk of heart attack based upon age, sex, blood pressure, cholesterol level, family history and diabetes.
- 23) Information on the beneficial effects of aspirin on heart disease.

24) Create nutritional profiles that serve as a data base for storing vital statistics such as age, sex, height, weight, ideal body weight, daily caloric requirements, weight loss information and ideal diet. The latter is broken down by grams of fats, carbohydrates and proteins. This may be printed out.

You'll notice that many of the items contained within the *Longevity* program aren't things of daily concern. Some are simply compilations of statistical data which are available in libraries, pamphlets from various sources and your family physician. They form a background of reference material which augments the more active portions.

The principal active (as opposed to reference) functions are:

- Ideal Body Weight
- Daily Caloric Requirements
- Weight Loss or Gain
- Exercise Caloric Requirements
- Ideal Diet
- Menu Planner
- Weight Calendar
- Nutrition Profile

Dieters will certainly benefit from Items 7 and 17, which track food consumption and allow a compilation of weight change vs. time. Combined with Items 3 and 24, a complete program of weight and diet control may be attempted. Note the use of "may be." As with any nutritional regimen, a certain amount of will power has to be added by the user. The Drs. Schaefer could not put that onto the disk for you!

Other items concern the statistics of mortality from various causes. A dreary subject, perhaps but again, one of interest to those hoping to live a bit better for a bit longer. Item 23 shows graphically the effect on potential heart disease of a single daily aspirin tablet. Amazing!

While none of the on-screen material goes deeply into the technical aspects of health and nutrition and lifestyle, it provides basic answers to basic questions. A bibliography and reference section provide guidance to anyone wanting further data.

In addition to the *Longevity* program, the disk also contains several additional programs. *A.I. Doctor* asks more than sixty questions about your health, symptoms and lifestyle. It then displays four diagnoses and probability. The doctors suggest you take this "advice," not with a grain of salt (see data on Effects of Salt in Your Diet) but more as an exercise in the use of Artificial Intelligence.

Code Blue allows you a two minute look at an Emergency room simulation involving various heart malfunctions. These may be specified or randomized. Little notes pop up while the "Doctor" contemplates a number of actions. It's easy to find how much you don't know. Try a transfusion and Nurse Snidely informs you that you've forgotten to intubate the patient. Choose from a list of 20 drugs. It's an interesting simulation. The two minute demo is really too short to do anything with and at \$65.00 a pop,

it probably wouldn't appeal to anyone not involved with the medical profession.

Vitamin takes a medical and lifestyle profile and turns out a very detailed vitamin and mineral profile which may be printed for reference. The source is given in case you might wish additional data.

The Pluses and Minuses

The programs are easy to use. A comprehensive manual explains most of the functions, and extensive drop-down menus are well designed for convenience. Printout to my Epson-configured Deskjet is clean and trouble free. The disk is unprotected, works in medium and high resolutions and will run from a hard disk.

Complaints are minor. Several places do not allow direct abort to menu, requiring additional paging or delay while a process continues. The "Spread of AIDS" visual runs for several uninterrupted minutes. There appears at the bottom of some screens a line of extra or reflected pixels. This does not affect operation. While I know that doctors' handwriting is meant to be unreadable, their print output should not be. A regrettable number of misspellings occur both onscreen and in the manual.

[*Longevity* lists for \$39.95 and is published by Shaefer Supergraphics, 1585 Casitas Ave., Pasadena CA 91103.]

We'll pay you to read *ST Informer*

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ST Informer

Dept CN, 909 NW Starlite Place,

Grants Pass, OR 97526



Current Notes

ST Library

MAY 1991

#555D: UTILITY NO. 49: ABFormat; Calendar Desk Acc V4.7 and **CALSH47A**; HotWire's screen saver and mouse accelerator; **IMG2ICN**, convert .IMG files to Degas Elite; **IMGVIEWR**, view .IMG files in 4-windows; **MCF**, desk acc shows directory structure; **ST_TOOLS**, PC Tools look-a-like; **TN_PCALC** v1.2 a windowed printing/programmers calculator; **TLC_ATTR** displays ALL files and allows changing attributes; **TLC_FIXR**, change text strings in programs; **TLCFORM2**, faST 9/10 sector formater. **TLC_NAMR**, use all characters in filename; **TLC_PLAY**, load/manipulates all digitized sound file formats. **TLC_SHOW**, quick and dirty Spectrum viewer; **X-MON**, replacement driver for Moniterm monitor.

#556D: CALAMUS NO. 4. Glip fonts. **ACURANSX**, an Acuransx created in Outline ART. **THE GUNTH**, 2nd place winner and **Jitney**, 1st place winner in Outline ART contest. **MYCALNDR**, calendar. PST fonts.

#557D: HERO! DEMO, graphic adv game with hundreds of items and creatures and over 200 rooms.

#558D: ST GAMES: AMAZE, (c/m). **Dark Castle** (c). Daniel's Dungeon maze game (c/m). **Reaction** (like ATAXX)(c). **Super Mastermind**.

#559D: FINANCIAL UTILITIES. **FGRAPH** demo, many common business/scientific graphs. **APROCALC**, professional, commercial-quality desktop calculator. **BIGBUX13**, helps you manage your money. **CHECK_BK** and **Chekbook** v1.19.

JUNE 1991

#560D: OTHERWUZ (C) **Wuzzers** is a hangman game where picture hint is displayed with each wrong answer. Incl file with nearly 50 picture puzzles.

#561D/562D. THE BIBLE SERIES NEW TESTAMENT. 28 ARC files w/1,311 files, Irving Risch's gift to the Atari Community.

#563D: GAME DEMOS. BUGST—Bug Bash by Big Shot Software. **CAPTIVE**, excellent futuristic game w/Dungeon Master mouse-view gameplay. **MSTDRI**—Jupiter's MasterDrive by UBI SOFT. **POND**—James Pond by Millennium.

#564D: TEXT EDITORS. 2BSFKEYS—2-Bit F-Keys V0.92 assign text string to your function keys. **ELVISED**, **GNO**ME, and **MGEMACS**—UNIX-style text editors. **MINITX22**—mini ver of TX2 File Viewer v1.42. **STEXT14F**—SText, a fast file reader. **TALKER**—talking text file reader. **TX2CN**—VT4—TX2 Converter.

#565D: DESKTOP UTILITIES. GOGOST41—replacement for Desktop allows quick access to all your programs and files.

BOOTMSTR—allows you to configure the programs and data files to be used when the system boots. **MAX30DEM**—demo ver of MaxiFile 3.0. **MENUPLUS**—a complete desktop enhancement to quickly launch (run) up to 160+ programs on your hard disk or floppy disk. **ZEST**—(M) simulates look of NeXT desktop, incl calendar, add book, typewriter, paint prgs.

#566: CAPITAL FUN! V1, Enque Software, teach and reinforce fundamental capitalization rules.

#567: UTILITIES. ACC13—Acc V1.3, load all of your accessories from folder. **ARC SH25**—ARC Shell 2.5 adds GEM interface to ARCTTP and LHARC. **AUTOARC**—automatic archiving of files. **DCBOOTIT**—v1.0 run a BOOT DISK from desktop. **DCLEFTY**—V1.0, for left-handed users, swaps the L and R mouse buttons. **DCPOPBAR**—V1.0, a popup menu of the menubar entries. **DC_RT_DC**—quick right mouse button click emulates a left double click. **DCTOPPER**—automatically top the window under the mouse. **FL-RMT3_5**—custom formatter, includes versatile virus utility. **FUNKALERT**—assigns buttons in GEM alert boxes to function keys. **LZH11318**—LHARC, v1.1318, w/docs. **MKRMDF**—ACC to make or remove folders within other programs. **MULTI135**—an archive shell to extract multiple archives into separate folders. **SQUEESIM**—Squeezes the last drops of disk space out of IMG files. **ULTRA**—ARCs complete disks into a single file.

#568D: DYNACADD DEMO, V1.84. Demo ver of DynaCADD. (M) 1MB (Replaces CN #460D.)

#569: AIR WARRIOR V2.0e Air combat simulator for multi-player battles on GE-ne or individually in practice mode. (Note: this disk replaces CN #520, V2.0b.)

JULY/AUGUST 1991

#570D: B/STAT,(replaced by #599).

#571D: ST WRITER, V4.1 popular word processor now works with Moniterm monitor, STE and the TT.

#572D: STE DEMOS NO. 1. MYMONO: mono emulator for STE. **BOING STE** demo illustrates the speed of the Atari blitter with approximately 400 colors displayed on the screen, plus **SPACE HEAP**! demo.

#573D: STE DEMOS NO. 2. COOL STE demo, 4,096 colors on your screen at once. **METASTE2**, 284 GEnie messages on the new Mega STE.

#574D: ARCADE GAMES. (C) SEASIDE concentration game; **DRACHEN** V2 remove all the tiles; **COLAWARS** colorful arcade action; **SPLATTER**—outwit your opponents; and **SPACEJET**, simple space shoot'em up.

#575D: GAME DEMOS. (C) VALGUS2—v3.0, complete squares around center block; **MAHJONG**—Shanghai clone; **PIPE MANIA**—place pipes around the screen to catch the flooz; **WORDBID**—Bid on letters; **BJP3DEMO**—explore blackjack; **DEBUT**—preview of planet simulation game.

#576D: ARTISTS TOOLBOX. (C) **NEOCHROME**—V0.5, paint program from Atari. **XS FX/D'ARTISTE**—a full featured drawing program. **DLX PAINT ST** Demo by Electronic Arts.

#577D: UTILITIES. BENCH2—time your machine through 5 tests. **CAL51**—calendar desk accessory. **D_VIEWER**, view files without using the keyboard or holding down mouse buttons. **DBLEFEAT**—disable the growing/shrinking box effects associated with GEM windows and also allow redirection of drives. **DC_MWRAP**—DC Mouse Wrapper. **DEFSEL**—The Definitive File Selector. **DIRPRINT**—desk acc to print out listing of all the files contained on a disk. **DL II**—a checkdisk/uneserase/diskedit program. **FILESORT**—sort ASCII text file. **FPPRNT**—outputs characters to the printer port more efficiently than TOS does. **LITEMAIL**—V2.02 GEM-based mailing label program. **MSE_TRIX**—Mouse Tricks desk acc gives user extensive control over mouse movement and menu style. **Read Text**, read and switch between as many as 8 text files. **REORG**—improves performance on hard and floppy disks. **RT_MOVE2**—enables you to move (as opposed to copy) files by holding down the right mouse button (TOS 1.4 only). **RFTDCA**—converts DCA/RFT file to WordWriter—ST and back again.

#578D: UTILITIES. DTERM_1K—1k ver of terminal emulation. **ELFBOOT**—STARTUP utility! **GEM_XYZ**—shareware GEM version 2.01 of XYZ protocol for transferring files via modem. **LHA130**—V1.30 of LHA, archiver/unarchiver for LZH files. **PS-FONTVW**—PageStream Doc file prints out All the characters in a Pagestream Font. **Q.TTP**—generate quotes for your BBS. **SORTIE**—V1.0 will sort any directory or folder by Name or by Date. **STREE104**—allows for searching for files using many different types of criteria. **VERIFY**—turn on/off the verify on your floppy drives.

#579: GRAPHICS UTILITIES. DMJ_GIF—GIF to Spectrum pic converter. **GAL LERY**—convert DEGAS pic into a self-showing program. **GVIEW105**—V1.05 of GEMView, the picture-viewing accessory. **I_FLOYD**—color IMG file viewer specifically for MONO systems. **MAC2IMG**—convert MacPaint files to IMG raster graphics file format. **VIEW**—whenever you double-click on any graphics file, **VIEW** will automatically display the picture.

SEPTEMBER 1991

#580D: PIZZMINI. Here is a short version of Stuart Bonwit's stick figure (pizzicata) ballet animation with sound. 1 Mb. (C)

#581D: CALAMUS NO. 5. 14 New fonts (Bernard Tangle, Absolute, Talansty, Windsord, Upperwes, Uncials, Recycle, Galleria, Roosthvy, Hotshot, Fundrunk, Diego, Chilpepr, and Mini6) plus **FontView** (displays all characters in a Calamus font file) and **CALAMUS14** (239 GEnie Calamus messages.).

#582D: LLAMATRON and DAMOCLES. **Lia-matron** is an excellent Robotron-type game from Europe, req 1MB. **Damocles** (a demo) is the latest release from Novagen and it is a brilliantly absorbing space game with high speed and solid 3D graphics.

#583D: BC-FORTRAN77. Ver 1.3C. BC-FORTRAN77 ver C is part of an extensive development system called version P. The purpose of version C is to make a FORTRAN77 compiler available for programming courses. Another advantage is that BC-FORTRAN77 is available for Amiga, Atari ST and MS-DOS computers. Disk contains compiler, linker, runtime library, math library and manuals.

#584D: OMNI V101. Multi-user, multi-tasking bulletin board system complete with documentation and full compatibility with all ST configurations.

#585D: HYPERLINK DEMO. HyperLINK is a multi-media, object-oriented application generator. The demo features a set of sample applications and also shows the application builder module with save/use features removed. Req 1MB, color or mono, ST/TT/STE.

#586D: FONT DESIGNER V2.0. This (non-saving) demo of Font Designer 2.0, distributed by Megatype, includes demo fonts in all major formats. This version of the demo-disk was released on July 1, 1991.

#587D: WORD FLAIR 1.5. This demo version of Wordflair, by Goldleaf Publishing, is fully operational. The only limitations are that you may not print or save documents that you create. An EXAMPLES folder demonstrates Wordflair's power.

#588: UTILITES. UNCLE35C ShowsPrints complete directories, saves\appends AS-CII format, mergeedit any ASCII file, stamp, rename, delete or copy any file. Create\delete folders, searches library OR disks for files, floppy formatter and label maker, clock. **ELFBOOT2** select desktop.inf files, choose programs to run, select desk acc, select and/or re-order AUTO folder programs, select ASSIGN.SYS files, and fully control system colors and parameters. **DISKSTAT** DC Disk Stat gives you a lot of disk structure information, like sectors per track, total tracks, total sectors, and much more! (C/M) ST/STE.

#589: UTILITIES. ADDRSSME Address and phone book desk acc. **CLOCKSET** Clock-Setter Ver 1.3 set the system time and date. **COMPARE1** GEM-based file comparison program. View ANY type of file in any one of four display modes; search for ASCII or hex bytes. **DC_HOMEY** find your mouse instantly! **DCSALVAG** copy as much of any damaged file as possible. **FSORT_13** File Sorter v1.3 sorts anything. **MDATE** Make*A*Date is a Scheduler/Dictionary/Phone Book/Notes Database and TODO List manager rolled into one. **N_CAP-SLK (M)** desk acc to show the status of the Caps Lock key by displaying a black

or white square at the right top of the screen. **VIDEO Bells & Whistles** Videotape database, version 1.2, a very full-featured program which helps you track your movies, specials, etc. on videotape. Makes full use of GEM, with menus, buttons, and dialog boxes.

NOVEMBER 1991

#590D: VDOS PROQUEUE. Shareware V3.0. Full working version, not crippled in any way. It's a menu program, and massive utility all built into one; 3 modes of operation allow you to tailor the system to your needs.

#591D: CALAMUS SL DEMO. This is a complete working version of the new Calamus shell, save disabled. Req. Atari mono monitor or TT. For those of you wishing to preview Calamus S/SL, this is it.

#592D: MONO GAMES. Online **BAKGAMMON**, play over the phone lines with a friend or against the computer; **BLOECKE**, a 3D Tetris game; **CRISSCROSS**, hybrid of GO, GOMOKU and OTHELLO; **DAME**, German game of checkers; **GOBANG**, game of GOMOKU; **POKER SQUARED**, solitaire poker game; **PONG**, handball or breakout; **SUPER BREAKOUT**, various levels, capture different options such as guns, larger paddle, multiple balls, much more; **ZESTPOKR**, draw poker, high card and a one armed bandit.

#593D: COLOR ARCADE GAMES. **BLOECKE**, 3D Tetris game; **BOING**, excellent arcade game; **DEMOLITION MAN 1.3**, puzzle by Clayton Walnum; **FOOTBALL**, try and beat the computer; **SNOWBALL FIGHT**, 2-player game simulates thrills, chills and spills of snowball fights!

#594D: ST MIDI DISK. DIGIPLAY PLUS, best digitized sound player ever put into PD; **ESION**, demo of a new music player program plays 4-channel stereo sound of incredibly good resolution; **MIDI MUSIC MAKER V2**, synthesizer req + 1 MB, plays 11 different music file types from various computers; **ROBO_BOP**, Midi Rhythm Editor for the ST; **STNOISE**, Noise Tracker is a 4-channel sampled music composition tool like TCB Tracker directly compatible with Amiga SoundTracker / Noisetracker ProTracker / StarTracker / Whatever .MOD files!!!.

#595: ARCHIVE PROGRAMS. Ver 2.6 of **ARC Shell**; **EDMSHELL**, simplifies use of ARC, LZH, and ZIP programs by providing an easy-to-use front end; **EXTRACT'R** is a general purpose archive extractor shell that supports ARC, LZH, ZIP, ZOO, and ARJ; **LZH201DE**, T. Quester's LZH v2.01d .TTP file; **XSHELL**, allows you to zoo, zip, lzh, sfx, guck and file find; **ZOO21**, v2.1 of ZOO archiver; **ZOOSHLS06**, GEM-based shell that makes using ZOO.TTP reasonably "beginner-friendly".

#596D: SUDDEN VIEW DEMO. (c) 1991 Sudden Inc, Rod Coleman, Sudden View

is not a word processor or desktop publisher, but rather a fast text editor that creates an effect Rod calls Live Editing. To achieve Live Editing, Sudden View removes the metaphor that stands between the user and his information; and then replaces it with an instant response to the natural, and implicit actions of the user.

#597D: TERMINAL PROGRAMS. **GIMETERM**, demo of the revolutionary new terminal program designed to take advantage of the Atari ST's GEM environment; **GIMEXYZA**, acc version of the XYZ program GIMEXYZP (included) used for background file transfers when used with G.I.M.E. Term; **ST_TERM**, very good PD terminal program that supports many of the top protocols.

#598D: ARABESQUE PROFESSIONAL DEMO. Complete BITMAP and VECTOR illustration software offers a new standard in image editing for desktop publishing. It allows you to create, import, and save graphics in the two standard formats: BITMAP and VECTOR. In BITMAP mode: Arabesque supports Degas, Stad, GEM IMG, IFF and Arabesque's own advanced ABM file format. In VECTOR mode: Arabesque supports GEM/3, Calamus CVG, and Arabesque's own advanced AOB file format. Requires 1 MB and monochrome monitor.

#599D: B/STAT V2.41d. Latest update to this powerfull statistical package.

Note CN #600-#619 clip art disks were obtained from the STUG (Atari ST User Group Norway) c/o S.A. Jensen, N-3630 Rodberg, Norway. CN has made an arrangement with STUG to bring these disks to you. Each double-sided disk has 20 Degas screens of clip art ready for you to import into your favorite desktop publishing software.

#600D: Christmas Scenes No.1 (STUG #G009).

#601D: Christmas Scenes No.2 (STUG #G049).

#602D: Birds (STUG #G005).

#603D: Dinasours & Reptiles (STUG #G003).

#604D: Cars (STUG #G037).

#605D: Bikes (STUG #G038).

#606D: Planes (STUG #G040).

#607D: Trains (STUG #G055).

#608D: Boats No.1 (STUG #G039).

#609D: Boats No.2 (STUG #G054).

CN disks are \$4 each (10 for \$35, 20 for \$60) plus \$1 S&H for every 4 disks (max of \$6 S&H). Order from:

CN Library
122 N. Johnson Rd
Sterling VA 22170

Call for MC and VISA orders.

(703) 450-4761.

As a special treat, we are introducing 30 new PD disks this month. Below are 10 more STUG clip art disks, each with 20 Degas pics ready for use in your desktop publishing. In addition you will find some terrific games and an incredible selection of utilities. The latest (and final) version of ST Writer (V4.4) is now here. Andrzej Wrotniak has released updates to both SubCal and Starbase. And much more... We hope this will contribute to your holiday season. Disks are \$4.00 each, a box of 10 is \$35, and a box of 20 is \$60. (Add \$1 S&H/every 4 disks upto a maximum charge of \$6.)

It's also time to introduce a NEW SYQUEST cartridge. CN Cart No. 4 will start with Disk #555 introduced in May and include, if we can fit it all in, every disk you see listed here on pages 76 through 79. These are mostly double-sided disks, so we may have to compress some files to fit within the 44MB limit. As a special Holiday sale, all the CN cartridges will be available for only \$109.95 until February 1, 1992. Happy holidays! -JW

#610D: Computers 1 (#G050)

#611D: Computers 2 (#G078)

#612D: Houses (#G013)

#613D: Printers Ornaments 1 (#G011)

#614D: Printers Ornaments 2 (#G024)

#615D: Printers Ornaments 3 (#G025)

#616D: Printers Ornaments 4 (#G027)

#617D: Frames (#G026)

#618D: Cars/Buses (#G036)

#619D: Signs/Headings (#G029)

#620D: COLOR GAMES. BEYOND—a Tetris spin off (demo). **JEPARDY3**—final version of jeopardy, includes a dispute key, four new games. **MILBORNE**—based on the French card game of Milborne. **WARSHIPS**—recreates the ship-to-ship combat of the Napoleonic period. (Color)

#621D: OFFENDER. Aliens have invaded the earth in a bid to take control of its natural resources and are currently destroying all lifeforms. Your mission is to destroy the aliens and protect and rescue the humanoids. Demo game is fully playable, but limits the number of levels you can attain. (Color) TT Compatible.

#622D: GAME DEMOS. AMAZE—neat maze demo draws and solves mazes, try to solve the mazes yourself and compare your score with the computer's solution. **AST_TUNL**—Astro Tunnel, low rez sprite master demo game gives you an idea of what you can do with Sprite Master. **DROMEPRE**—very similar to M.U.L.E., a colonization/trading game. **MAHJONGG**—classic puzzle game with solvable layouts of the first 5 games. **NOIDS**—a breakout type game. **WARZONE**—fully playable one level demo of Warzone, a com-

mando type game by Core Design. (Color)

#623D: MONO GAMES. CATCHME—use the mouse to catch cards that say catchme before another appears. **FRUSTRAT**—Frustration! a word search game for two people. **MANIPULR**—manipulate picture files in various ways. **PAIGOW**—Pai Gow poker as played in Las Vegas! **SCHIEB**—manipulate squares to get them in correct order. **WUNDER**—take graphic image and rearrange characters. (Several of these games are in German.) (M)

#624D: GAME DEMOS. BOSTONBC—playable demo of Boston Bomb Club arcade game. **ECCB3DEM**—demo of Elie-mouse Complimentary Coloring Book, for children, fully functional but contains advertisements at points in the program. **REPEAT**—Desktop Repeat is a game in an accessory! Follow the sequence of sound and color just like the SIMON game. (Color)

#625D: ST WRITER ELITE, Version 4.4. Final, optimized, version of the ever-popular ST Writer word processor, works on all TOS's and any ST or TT. GEM based. Compatible with all previous ST Writer files. Help function on edit screen. Includes German, Spanish, and Magni-writer versions.

#626D: TERMINAL PROGRAMS. **FZT_D204**—Demo of FreeZe Dried Software Terminal ver2.03. The best terminal available for the ST/TT computers with a host of features. Only non-essential commands not implemented. **IG216**—an ACC online graphics interpreter, can be used with any terminal program that has a GEM menu bar, a super duper VT-52. **KERMIT**—a Kermit transfer protocol implementation, includes extensive docs. **ATARIBBS**—listing of Atari 8-bit and ST support BBS's across the nation.

#627D: GP_EDIT LIBRARY. Demo by DSA Programming. For use with GFA Basic 3.0 or higher, this library allows even novice programmers to get the same results as the professionals do, but without the months (or years) of development time. An invaluable tool for game designers..

#628D: OMEGA 0.75. The latest all ASCII Role Playing Game, has really neat maps, multiple classes, jobs, a huge landscape to explore, 5 gods, in depth magic/clerical type system! Can possibly be used as a BBS doorway if you have the RAM. Works on a 3.5 floppy with disk swapping, but a HD is recommended. Req 1MB or more!

#629: UTILITIES. ACCENT—an AUTO program that lets you type in any character into any text field. **ARGUS**—display verbose disk information, such as reads and writes, in the upper-left corner. **CHKHD81**—a thorough hard disk checker. **CLOCK17E**—desk acc clock has the option to be analog, digital or both, including the time and date. **BOOTPLUS**—allows you to choose your ST's resolution at

boot time and to specify certain programs to be run when the ST boots, depending on the resolution chosen.

C&P150—v1.50 of Cut & Paste, a GEM-based file splitting/concatenation utility.

DCLITOFF—DC Light OFF deselects the floppy drive, turning the drive's light and motor off. **DCMOMETR**—DC Mouse—ometer lets you know how far your mouse has travelled. **DCMOUSER**—DC Mouser will display or hide the mouse with the press of a keystroke. **DCMSAVER**—DC Mouse Saver turns the mouse cursor off after a defined time of no mouse activity and turn the mouse cursor back on with any mouse activity. **DCNOALRT**—DC No Alert keeps an alert box from being displayed and will 'fake' the return of the DEFAULT button. **DCPOPBR2**—DA that gives you a popup menu of the GEM desktop menubar. **DCRUNREZ**—DC Rez Run automatically switches resolution before running desired programs. **DOSTESTR**—A&D's Disk Operational Speed Tester—DOS Tester v1.02. **DSX_110**—program/desk acc for viewing disk statistics. **FIND-MAC**—scan drives to find programs. **FRM-D012D**—FormDolt alters the way that dialog boxes and alerts behave in most programs. **FSELECT**—replacement file selector. **LOWSWITCH**—handles resolution switching so you don't have to go through the desktop to run a low rez. game. **MCLOCK**—corner clock displays in 12 and 24 hour formats. **MDFORMAT**—music (the theme song from Midnight Express) plays while your disk is being formatted. **MONMAGIC**—Monitor Magic turns your color monitor into a green or amber screen. **N_FORMAT**—a desk acc for formatting a 720 K DS disk that can be read by an IBM-PC or compatible. **N_MENTIM**—MEN(ubar)TIM(e), acc shows the current date and time in ISO format in the accessories menu bar.

SPEEDMET—benchmarking program. **STINT3_1**—select and deselect TSRs and desk accessories. **WINXV13**—increases the number of GEM windows that can open at one time. **ZOOM**—zooms in on a small part of a monochrome screen.

#630: PROLOG. A full implementation of the Prolog language for the ST. It comes from Germany and includes a documentation file in German. It has access to ST's VDI routines for drawing to screen. Any book on Prolog can be used to study and use this program. **MONOCHROME ONLY** Docs in German—some source in English.

#631D: CALAMUS NO.6. CALENDAR—Calamus doc using piping to update the number sequence for each month.

EXT_CHAR—“how to” insert extended characters into your document. **FORMS-SET**—collection of forms from business cards to work orders. **F_SCALE**—acc that allows the proportionate calculation of Calamus frame sizes. **MANUALA**—Page Layout file for a 5 1/2 by 8 1/2 manual format. **TXTRULER**—explains the basics of

how to use text rulers. Plus 11 fonts (A-Logo, Diane, 3 Hebrew fonts, Krazy, Moscow Regular, Premier Lightline, Showboat, Tiempo-2, and Tiempo Light Italic.)

#632: STARBASE & SUBCAL STAR2000-

next yearly update of Star 2000: a free-ware subset of Star Base from Debonair Software, who else is foolish enough to write programs for such a small market!). NOT just a demo! The subset has 2000 brightest stars, 100 deep sky objects, planets, and on-line help. Runs on any monitor, any ST or TT. **SUBCAL20**-next yearly update of Sub_Cal: a freeware subset of El_Cal (NOT just a demo!). The new features include systems of differential equations (with or without plotting) and unit conversion. The "old" features are: expression evaluation, definite integrals, differentiation, equation solving in intervals, linear and non-linear equation systems and linear algebra, function optimization (general), function plotting, simple statistical operations (data manipulation, mean, s.d.), histogram fitting (to ANY distribution function), polynomial regression, fitting points with a curve (any), and whatever else.

#633: CALCULATORS. A variety of calculator programs from very simple to very complex: Beancalc, Calc2, BiCal2, Programmer's Calculator, MI59, ProCalc, Taschenrechner, TN P_Calc.

#634: CPX PROGRAMS. XCONTROL-newest newest version of the Atari control panel. It is designed to take advantage of features only available in the latest (2.0) versions of the operating system. Allows users who do not have a MegaSTE or TT to use CPX programs. Includes several CPXs (COLOR, WCOLORS, SOUND, GENERAL, MACCEL, MODEM, CONFIG, PRINTER). **BOOT_CPX**-lets you activate and deactivate TSRs and desk acc. **CPX_MCLS**-4 CPXs from Germany (in English) that 1) show system information, 2) show the cookies installed in the system, 3) configure NVDI, and 4) maintain files (copying, renaming, moving, setting program (archive-, TT-, read/write-, and fastload-bits). **GER_CPX** (FORMAT, CALENDAR, ASCII, NVDI-CONF, and MS_CACHE). **DOUBLE**-doubles the number of lines of resolution on the screen-color becomes 640x400; monochrome becomes 640x800. (STE only). **LASERCPX**-checks SLM's Status and ID#. **RDY_STE**-"RDY" reset-survivable configurable ramdisk for the STE. **VANITY**-Vanity Plate for your computer. **REV_DEMO**-full featured demo of CPX Reversi game.

#635: MIDI PROGRAMS. EZS1DEMO-Demo of EZ-Score Plus professional composing/scoring/printing program.

BACKTRAK-plays Noisetracker MOD files in the background. **JKUBBX11**-Jukebox v1.1, plays Noisetracker modules in the background. Can be run as a desk acc or program. **PATTERNER V1.3**-MIDI mu-

sic experiment kit, creates outgoing MIDI data at playback time. With a single mouse click you can switch to another scale, transpose the scale, play the beat backwards or upside down and much more.

#636D: BBS PROGRAMS. COWS_87S-

Cows! v8.7s, on-line text adventure game. Save the world from those crusty Moovian agents! **OBBS_215**-Other BBS Program. **ST_KEEP**-full featured and fully supported BBS! Requires 512K RAM, hard drive, modem. Allows 32000 users, 32000 rooms (SIGs), 32000 messages per room, 255 floors, 255 doors (on-line games, other BBS's), and 15 Groups. Xmodem CRC & 1K, Ymodem, Zmodem, download ratio. ANSI, VT-52, ASCII graphics support. Runs on color or monochrome monitor.

#637D: EDUCATIONAL PROGRAMS.

ADDUP-a game in which you try to make totals of 15 using 3 consecutive blocks and avoid totals of 14. The game uses falling blocks that you can move using keys on the keyboard. **CLASS_31**-ver3.1 of CLASS, a combination gradebook, grade calculator, graphics, and statistics package for teachers. Use it to store names and grades, calculate final averages, experiment with curves, and view graphs of the results. **MATH QUIZ**-an arithmetic exercise program for keeping math skills alive and intact during the summer months. **MSTRQUIZ**-shareware version of Master-Quiz. **TEACHABC**-helps youngsters learn their (sing) ABCs. **STSPELL1**-helps youngsters improve their spelling skills.(C)

#638D: APPLICATIONS. AREACO30-Area Code Locator v3.0 desk accy/program shows area codes, time zones, cities, and local time. **CAL_60**-Calendar desk accessory V6.0. Schedule events by date, position, or every so many days. All new screens, more room to describe

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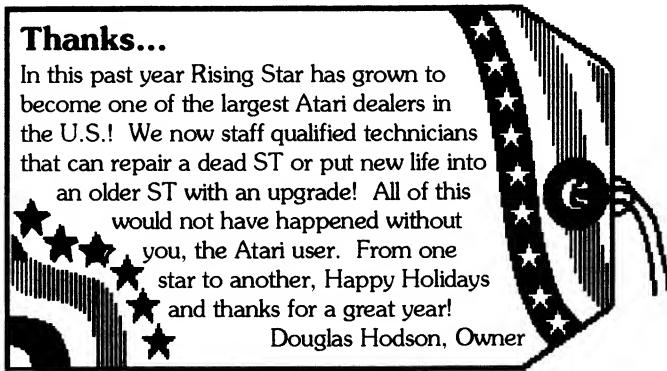
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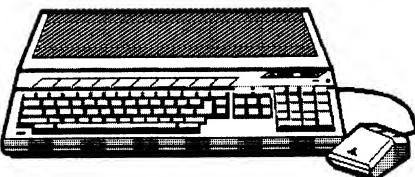
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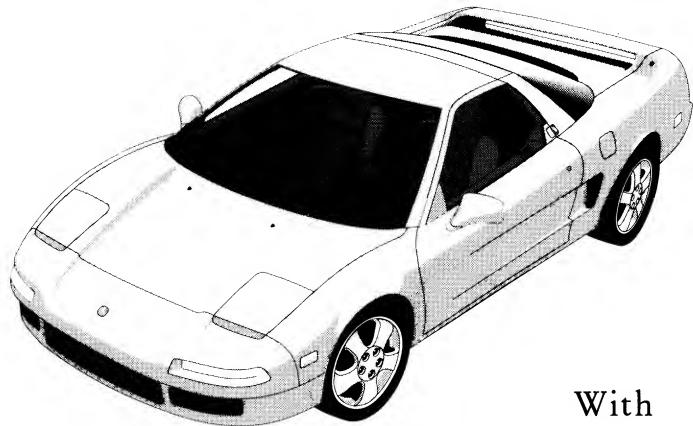
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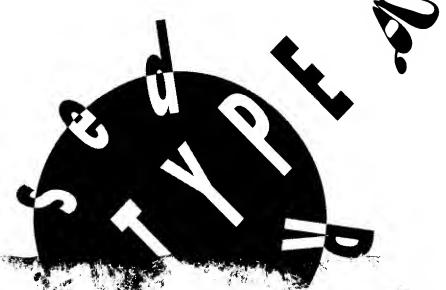


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